AMERICAN RAILROAD JOURNAL,

AND

IRON MANUFACTURER'S AND MINING GAZETTE.

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PUBLISHED AT 105 CHESTNUT ST. PHILADELPHIA.

Saturday, January 1, 1848.

THE RAILROAD JOURNAL.

Having been frequently advised, by those who have long taken an interest in the success of the Journal, to give it a wider scope of usefulness, by including the *Iron* and *Mining* interest, as well as the Railroad interest, in its field of operations; and being now able to devote my entire attention to the Journal, I have concluded to give a portion of it to those subjects, and hope to be able to make it useful to them, without interfering with the great object for which it was established, and to which, for *fifteen* years, it has been devoted.

Being no longer engaged in other pursuits, my entire attention will be given to the Journal, and I *hope* to be able to visit, during the ensuing year, many of the principal Railroads and Iron Manufactories in the northern and middle States, and thus collect, from personal observation, much useful information.

Having entered upon another volume, and a New Year, I desire to tender to the readers of the Journal the compliments of the season, and ask of them their aid in extending its circulation.

D. K. MINOR.

Oregon, or Atlantic and Pacific Railroad.

When Mr. Whitney first advanced the idea of a railroad from the Mississippi—or Lake Michigan—to the Pacific, a few years ago, it was looked upon as a visionary scheme, and its construction as one of those things which might *possibly* occur half a century hence, certainly not sooner, if ever.

We have not, for many years, doubted the ultimate construction of a railroad from the Mississippi river to some point on the Pacific ocean—but, in our opinion, it was not then as *essential* to the prosperity and convenience, and wants of our own people, as many other railroads already commenced, projected, and required within the limits of the several States; therefore we have never entered with spirit into the advocacy of the project. Such, however, has been the progress of events, and the change of circumstances, in relation to the territory bordering on the Pacific, since Mr. Whitney's plans were first developed, that the project assumes, in our estimation, the importance, almost, of necessity, in the management of our own affairs, in addition to its importance in a commercial point of view with Asia; we therefore give, in this number, an able and interesting article, with *two* maps, prepared with great care by Mr. Whitney for DEBOW'S COMMERCIAL REVIEW, an excellent work published at New Orleans. From this article, and these maps, the relative merits of the different proposed routes may be pretty accurately estimated; and of the plan, so far as we understand it, proposed by Mr. Whitney, of providing the means to construct the road out of the public lands belonging to the people, we entirely approve, as we know of no use to which a portion of them can be more usefully applied—unless it be in aid of two or three important lines from the Mississippi to the Atlantic—a measure to which we shall call the attention of our readers at an early day.

The indomitable perseverance, and unwearying labors, of Mr. Whitney, in the cause of this—the greatest project of the age—entitles him to the success which he is *resolved to achieve*; and we bid him God-speed.

Reading Railroad and its Business in 1847.

The following statement, from the "Miners' Journal" of January 1st, 1848, shows, in small space, the result of the Anthracite coal trade of Pennsylvania for the past year. The increase of shipments from the Lehigh, Schuylkill, Lacawana, and the Wyoming regions, has been 620,698 tons over 1846—of this increase 352,392 tons were sent from the Schuylkill region. The total amount sent from the Schuylkill region in 1847 is stated at 1,648,320. Should the *increase* for 1848 equal that of 1847—and it will probably exceed it by over fifty thousand tons—there will be 650,000 tons for the canal, and 1,350,000 for the railroad; and in 1849 there will be 900,000 tons for the canal, and 1,550,000 tons for the railroad; and in 1850 there will be 1,150,000 for the canal, and 1,800,000 for the railroad; which at low rates of transportation would give the *shareholders* in each company a fair return, or over *nine* per cent., annual interest, on their investments, as follows,—

On the canal 1,150,000 tons at 60 cts. toll. $690,000
On the railroad 1,800,000 tons, at $1 25 cents freight.....2,250,000

The $690,000 received by the navigation company, will give 6 per cent., on *six* millions of loan, and 9 per cent. on three millions of stock, and leave a balance of $60,000, and the entire tolls on all other articles transported to keep the canal in order, and make improvements. And the $2,250,000 received by the railroad company in 1850, for its coal business alone, will give $1,200,000 for expenses of repairs and working the road—6 per cent. interest on *nine* millions of loan, and *over* 12 per cent. dividend on *four* millions of stock—leaving the receipts from passengers, and ordinary freight—amounting to at least $200,000—as a surplus fund, to commence laying down a third track with.

With these prospects ahead we think the friends of *both* works ought to be content, and the managers ought to agree upon rates of toll and transportation mutually advantageous, and then let their strife be to see who shall give to the operators, and the shippers, the greatest facilities.

The statement referred to is as follows:

	1847.	1846.	Increase.
Schuylkill—railroad.	1,347,974	1,233,562	114,413
" canal.....	232,889	3,440	229,449
" Pinegrove..	67,457	58,996	8,531
	1,648,320	1,295,928	352,392
Lehigh Region.....	643,973	522,990	110,983
Lackawana.....	388,000	320,000	68,000
Wilkesbarre.....	284,398	192,503	91,895
Shamokin.....	no return.	12,572	
	2,964,691	2,343,903	
	2,343,993		
Increase in 1847,.....620,698			

Post Routes in the U. S. in 1847.

The following synopsis of the post routes in the several states, has been compiled from the Postmaster General's annual report, for which we are indebted to the Baltimore American.

Length of Post Routes and Cost of Transportation of the Mail in the various States of the Union.—From sundry documents attached to the Postmaster General's report, the following table is extracted:

States.	Routes miles.	Total an. cost
Maine	3,980	$41,964
N. Hampshire	2,267	25,560
Vermont	2,486	25,563
Massachusetts	3,478	107,393
Rhode Island	383	9,187
Connecticut	1,820	45,797
New York	13,292	229,307
New Jersey,	1,980	53,930
Pennsylvania	10,226	155,412
Delaware	549	7,862
Maryland	2,359	133,751
Virginia	10,782	192,615
N. Carolina,	7,423	172,520
S. Carolina	4,718	118,157
Georgia	5,761	153,001
Florida	2,958	45,193
Ohio	11,538	172,295
Michigan	4,255	38,211
Indiana	6,160	52,439
Illinois	8,276	102,485
Wisconsin	3,078	15,043
Iowa	1,631	9,722
Missouri	7,897	49,720
Kentucky	7,705	89,581
Tennessee,	6,828	55,298
Alabama	6,553	136,495
Mississippi	4,117	58,451
Arkansas	4,637	39,966
Louisiana	3,208	41,795
Texas	2,766	24,102
Total	153,808	2,406,818
Mail agencies on railroads, steamboats, etc.		46,153
Total		$2,453,001

Kyanizing Timber for Railroads.

We have been often applied to, from different parts of the country, for information in relation to the process, and the benefits resulting from the process, of kyanizing timber for railroads—and we have always endeavored to give, in reply to such enquiries, all the information that we could obtain from reliable sources.

By refering to the Railroad Journal for November 13th, 1845, will be found a communication in relation to the experiments made on the New Bedford railroad, to which the writer of this article refers. There is another communication in the Journal of 3d January 1846, of much interest on the same subject; another at page 89, February 7th, 1846, and still another at page 410, or June 27th.

These communications all convey the same favorable impression of advantages to be derived from *Kyan's* process of preserving timber for railroads; and now we can add the following valuable article from a gentleman well known, especially among railroad men in New England, whose experience in the matter is probably equal to that of any other man in the United States; and we are greatly obliged to him for requesting the gentlemen to whom it was addressed, to allow us to use it; as it will answer many questions, that have been put to us, far more satisfactorily than we could possibly do it ourselves.

The communication is addressed to "*Messrs. Farr, Powers and Wightman,*" and is as follows:

NEWTON, MASS., Dec. 13, 1847.

GENTLEMEN,—In reply to your enquiries respecting my experience and process for kyanizing timber, I would say, that I have, during the past year, prepared about 60,000 cubic feet of Bridge and sleeper timber in this manner, for the Providence and Worcester railroad company.

The process, as you are aware, is simply steeping the timber in a solution of corosive sublimate, in tanks prepared for the purpose. I used two of these tanks for sleepers or ties, each of which was 20 feet long, 8 feet wide, and 6 deep; and one for bridge timber, 48 feet long, 5 wide, and 4 deep. These tanks were made of southern hard pine plank, three inches thick. It is necessary that they should be made of the best materials, and put together in the most perfect and workmanlike manner, or there will be danger of loss by leakage. For convenience in getting the timber in and out of the tanks, I placed them in a cellar, dug and stoned for the purpose, which was about four feet wider and six feet longer than the two tanks, which allowed a passage around and between them of about 2 ft. This cellar was about 3½ ft. deep, making the top of the tanks about 3 ft. above the ground. Upon the tops of these tanks, and resting partly upon each, was placed a small tank for dissolving the salt and preparing the liquor. This tank is 8 feet long, 4½ wide, and 3 deep, and capable of containing about the quantity of liquor necessary for filling one of the tanks after the timber was in. On one side of the cellar opposite the centre of the small tank, a well was dug and a pump placed therein, the nose of which was high enough to convey the water into the small tank. A pump was also placed in the corner of each of the tanks, for pumping out the liquor from the same into the small tank, when the process was completed.

In these tanks we prepared	48,178 cubic ft.
Of timber for sleepers or ties, and for bridges	13,445
Making a total of	61,623 feet.
For all this it required 1720 lbs. corrosive sublimate, a 1.21	$2081 20
Cost of tanks	981 37
Carting from depot to tanks	269 00
Cost of cellar, shed, well, pumps, etc.	293 88
Labor and superintendance	1,139 96
Total cost	$4,765 41

This makes the entire cost of kyanizing 7.73 per cubic foot, or 13.52 per sleeper, 7 feet long and 6 inches square. This is upon the assumption that the labor of hauling the bridge timber was no more than that of the sleepers; whereas the fact was that the labor of putting in and taking out this long, heavy timber cost in time, dericks, etc., at least double that of the sleepers. A suitable allowance for this difference would reduce the cost of sleepers to something less than 13 cents each.

Deducting the cost of tanks, pump, shed, cellar, etc., now on hand, and about as good as new, reduces the cost per cubic foot to 5.63 or 9.85 per sleeper, without any allowance for difference of labor for the bridge timber.

Kyan allows 2½ lbs. corrosive sublimate to 100 feet timber. I used 2.77ths. He, however, recommends one pound to fifteen gallons water. I used one pound to fourteen gallons.

The bridge timber was pine, the ties hemlock and spruce. Hemlock delivered at Worcester cost about $11.50 per 1000 feet, board measure; spruce about $13.00. Estimating 47 sleepers to 1000 feet makes the first cost of hemlock ties 24.47 cts.; spruce 27.66; including kyanizing 37.47 and 40.66. Deducting cost of tanks, sheds, etc., 31.32 and 37.51. The cost of chestnut, the most approved kind of timber for this purpose, and most generally used in New England, varies from 30 to 40 cents each sleeper. It will be seen, therefore, that the cheap kinds of timber cost no more with, than chesnut without kyanizing. Our bridges also are left without covering, (the cost of which is probably greater than kyanizing,) and of course capable of sustaining a greater weight and more conveniently examined and kept in order.

One word as to the confidence which we have a right to repose in this process. Here I shall say nothing as to the fact that its theory is in conformity with the scund and well understood principles of science, or of the accounts we have of European experience, and of other experience in the United States. All this you are as well acquainted with as I am. In the summer of 1839, I prepared by this process about 2500 sleepers, which were placed under the rails of the Boston and Worcester railroad in September of that year. They were principally hemlock with some spruce; five inches square, and seven feet long. I have recently examined them thoroughly and have been unable to detect the slightest evidence of decay in any of them. The sap wood which forms a part of some of them is in all instances as sound as on the day when they were laid. In one instance I noticed a piece of bark adhering to the sap wood, as closely and in as sound a state as it ever was. In the next summer, 1840, ten miles of the New Bedford railroad (in the construction of which I had some agency,) was laid on sleepers prepared in the same manner. These sleepers, after an exposure of seven years, I have also very carefully examined and find them apparently as sound as they ever were. It is true that many of them have been taken up, but always on account of their having been checked and split so as to fail of holding the spike, a failing very common to both these kinds of timber; which I now think should be guarded against by adopting 7½ instead of 7 feet for the length of the sleeper, and by boring for the spike.

I send you herewith a block sawed from one of the sleepers laid upon the Boston and Worcester railroad eight years since. The top of this sleeper lay exposed to rain and sun during that time, the sides and bottom were under, or in the ground. You will notice that I have selected a piece which is partly sapwood.*

Some of the timber kyanized for the Providence and Worcester road was done last winter, and although the tanks were covered and keptwarm enough to prevent the top liquor from freezing, yet, as the sap of the timber went into the tanks frozen, this ice in combination with the salt solution produced a degree of cold sufficient to freeze all the liquor (except that part of it which was at the top of the tank, and kept warm by the stove) into a solid mass. I have some apprehension that the process in these cases will prove less effectual, besides being much more laborious and expensive, as well as more wasteful. The thing ought not to be attempted in winter."

Having given the communication, we take the liberty, though unauthorized, to make the following extract from the letter accompanying it, with the name of the writer, who will be recognized as one of the early and very efficient friends of the Western and other Massachusetts railroads, and therefore his statements will be considered good authority for railroad companies to act upon. He says:

"The Western railroad company, in the construction and operation of which I was for nine years associated, who were the builders of the Pittsfield and North Adams railroad, a large number of the sleepers of which were kyanized—have just now determined to prepare 50,000 sleepers in this way for their second track. Governor Payne, President of the Vermont Central railroad, to whom I some time since communicated my views, informed me a day or two since that he had determined to adopt the process largely. Other companies are also

* This specimen may be seen at this office in a perfectly sound state.

enquiring, and scepticism is yielding, and chesnut timber becoming more scarce. * * * *

"I wish you to saw the block of kyanized wood which you will receive with this, into two pieces, and give the editor of the Railroad Journal one of them. Yours truly,

WILLIAM JACKSON.

Transportation of Troops, Munitions of War and the Mails, by the U. S. Government on the Railways of Companies.

The following communication is from a gentleman of enlarged views, close observation, and a thorough investigation of the operation and influences of railroads upon the great interests of the country; and we commend his views to the consideration of all who feel an interest in the progress and improvements of the age in which we live.

RAILWAYS AND THE POSTMASTER GENERAL.

The Law in the state of New York to fix compensation for carrying the U. S. Mails; English rates for mail service on Railroads, etc.

For the American Railroad Journal.

I am glad to find that the Journal has taken up the cause of the Richmond, Fredericksburg and Potomac Railroad, in the course pursued by the Postmaster General, in reference to the *comparative* service rendered by this road, and others, in carrying the present bulky mails; and the maximum compensation $237 50, or 25 per cent. over the old post coaches. Few there are that get this trifling recompense, for the valuable service performed.

There is a mass of prejudice and error in this country, particularly in high places, as to the ratio of "*just compensation*," to railways, for carrying the mails, and the service they are now, and will be hereafter, to the general government.

If I am not mistaken, this prejudice is the lingering influence of, and is fanned by the old stage contractors. They would compare their horses of flesh, and the average of 5 miles per hour, to the *iron horse*, and 20 to 30 miles per hour; the rate of speed now being introduced, by contract, on our thoroughfares, where they have laid down the heavy edge rail. The cuckoo song of stage contractors is "monopolizing monopoly, railway extortion," etc.; and we find this error echoed by the postmasters general, at Washington, for the last 10 years, and many others in high places, with the honorable exception of John C. Spencer, of this state, late Secretary of War, who has had the opportunity to see, and the liberality to acknowledge the advantages of railways, in carrying our increasing mails, and for military defence.

I agree that Congress shall have the *right* to use railways, for the conveyance of the United States mails; and I wil add, for the argument, that railways have *no right* to refuse to carry the mails: yet, in this country of laws, this right to use the railroads must be under salutary restrictions. A fair bargain on both sides, with a power to fix a just compensation in the several states. Then, when there is fault or default, in carrying the mails up to contract time, let the law and the press step in to right matters. Let us be cautious how we appoint "boards of commissioners," as lately called for by the New Haven Register, "to see that the roads are kept in order—enquire into all abuses of their charters—examine their general concerns, and see that the mails have every facility for rapid transmission and delivery."

If Connecticut, Virginia, and other states, will do as the state of New York has done, the general government will have all the right and privileges on railways they are entitled to.

In 1836, the writer had the pleasure and opportunity to aid the late and talented J. B. Yates to bring in "a *patern* bill," for the Attica and Buffalo railroad. (passed 3d of May, 1836.) It had in view, the especial protection of the rights of the people, and of the general government; also to force a "*just compensation*," to railways. This law was enacted to prevent their refusal to carry the U. S. mails. The 20th Sec. of the act referred to, was as follows:

"It shall be the duty of the said company, when applied to by the Postmaster General, to carry the mails of the United States, on the said road; and in case they shall not agree with him as to the rate of compensation therefor, and as to the time, manner, and condition of carrying the same, it shall be lawful for the Governor of this state (New York) to appoint three commissioners, who, or a majority of them, after fifteen days notice, in writing, to said company, shall fix and determine the prices, terms, and conditions aforesaid."

This law preserves the sovereignty of the state in the action of the Governor, to force an equitable compensation, and in my view, covers the ground completely. The great state of New York, with a liberal spirit that was commendable, has been the first to aid the general government to acquire the right to pass through and over this state, with her mails, by railways. This example should be followed by other states in the same spirit. And in a similar spirit, the general government should loose no time, while railways are weak, in debt, and paying poor dividends, particularly to the south and to the west, to pass some general law *to aid* railways. This should be done to carry out and complete the sea board line, with the rib railways over the Alleghenies, in the course of construction, through the same states, to St. Louis, and to the Lakes.

This can be done by a loan of the Bonds of the Post Office Department, to such railways as are completed, and can give security to perform mail service—such for instance as the Wilmington and Raleigh—say in amount equal to the capital, $6000 per mile, it will require, at 5 per cent., to pay the rate per mile per annum, the government is now disposed to pay on important routes. The consideration being the *perpetual* right, from the states, and their *local* corporations, to transport the mails, with such other privileges as may be agreed on. For instance, such as the transportation of troops and munitions of war, at fixed *low* rates, for each soldier, and ton per mile. A general law to aid railways, through the bonds of the Post Office department, can be framed with security to the general government; beneficial to the revenue, and is highly important to secure a cheap and uniform rate of postage.

Laws in the several states to force these private incorporations to a compromise, in carrying the mails it would appear, is necessary; when we find a powerful canal and railway family influence, combine, in a neighboring state, to tax the U. S. government, and the travelling public, for the especial benefit of the state. On a main sea board line of railways, in fact a partnership concern, the state putting in no money, but yielding up the sovereignty for a paltry $30,000 or $40,000 per annum. This exhibit of state cupidity should be a beacon to the general government, to secure, in time, the consent of the several state legislatures, to a law giving the right to fix an equitable rate, or to force an agreement, with the several railways for their perpetual use, in carrying the mails and munitions of war.

Monarchial Great Britain, to carry out her *penny postage system*, where there is not one newspaper to our dozen, has seen it for her interest, early in the railway movement, to pursue a liberal course and to pay an equitable rate per mile per annum.

By a reference to the semi-annual English railroad reports in Herepath, and the other railway Journals you receive, you will find that the principal railways in England receive from the government, (and without cavil,) $600 to $700 per mile per annum.—

The lowest rates on their branch railways and short cross roads exceed, I believe $300 per mile per annum. This is the highest rate allowed by the Post master general, and then only on the main line between Washington and New York.

Here immense mails are transported, particularly about these days, at a rate per ton weight, that does not exceed that of "*parcels of merchandise*" paid to railways in Great Britain. A large portion of our railways are grudgingly paid $50 to $150 per mile per annum on important mail routes, with much official scolding done gratis. This is done without considering the service received, and that as an investment, (now upwards of $130,000,000— on more than 6000 miles of railway in operation in these United States,) that does not yet pay their enterprising projectors' (except in New England) legal interest. But for railways the present cheap system of postage (a blessing to all classes,) *could not have been successfully introduced*. With the sea board line completed from Maine to Texas, and the lines through the several states into the interior and to the Lakes, we can have our two cent postage, while our newspapers and periodicals can, as they should, *go free*. This will best ensure the continuance of our Republican institutions and "diffuse knowledge among men." It binds the Union, literally, in bands of iron, and its value cannot be estimated by dollars and cents.

The sum claimed by the Richmond, Fredericksburg and Potomac Railway Company for the service performed—ensuring *certainty* and *celerity*—the life of business, is cheap compared with the rates formerly paid on this route to the "Swift Sure" stage contractors. How does the average rates per mile per annum, in this country, compare with those of Great Britain? Let Major Hobbie, who has just returned from England and the Continent, enlighten us, Mr. Cave Johnson, and our thirtieth congress. They will find, or I am much mistaken, that for half the distance of miles of railways completed in England and Scotland, and on territory not to be compared with the state of New York; instead of these wide spread United States, double, if not treble, is paid per annum for mail service, to that now paid by our government, for the same period.

It will be an interesting enquiry. Will you ask our friend, E. Hedge, I believe now in England, to enlighten us on this subject, and oblige,

Yours truly, J. E. B.

Value of Railroad Stocks, and their Prospective Values in the U. S.

The following statement in relation to the Massachusetts railroads, during the past year, is highly gratifying to those engaged in the construction of new lines, as well as to those interested in the roads here named. The annual reports will show that the *earnings* of the numerous railroads, in the country, will greatly exceed that of the preceding year; and many people who had articles ready for market in the fall of 1846, after the close of *canal* navigation, will duly appreciate the value of railroads to the farmer. Another such demand, in winter, for the products of the soil would be sure to bring *millions* of capital from other investments in to the construction of railroads.

"The following semi-annual dividends, for the six months just ended or about to close, are announced:

Boston and Maine railroad, five per cent.

Boston and Worcester railroad, five per cent.

Fitchburg railroad, five per cent.

Western railroad, four per cent.

Lowel railroad, four per cent.

Eastern railroad, four per cent.

Boston and Providence railroad, four per cent.

Old Colony railroad, three per cent.

Fall River railroad, three per cent.

The receipts of the Western Road for the financial year, ending on the 1st of December, have been $1,318,000, showing an increase over last year of $365,000 or $1,000 per day, for every day in the year, Sundays and holydays included. This is $265,000 more than the estimate made at the last annual meeting of the Corporation. The increase last week was $11,000, and the business of the approaching season, after the close of navigation, promises to be much greater than ever before."

Commerce of the New York Canals in 1847.

The Albany Argus gives the following statement of the past years' business on the N. Y canals. It shows an extraordinary increase over the preceding year.

To those who recollect vividly the day, in 1817, when the first spade was put into the ground, officially, in its construction, near *thirty-one* years ago, and who recollect the predictions of intelligent men of that day, in relation to its ultimate completion, and the returns to be derived from it—this wonderful increase of receipts, on a rate of tolls reduced, at least, one half from what the original estimates were based upon— is highly interesting.

The amount of tonnage passing through the canal, during its *eight months* of navigation, was 1,995,933; and the value of that tonnage was $165,365,986; being over *six millions* of dollars greater than the entire exports of the United States, for the year, ending 1st of July, 1847.

"We have," says the Argus, "procured from the Canal Department some interesting items from the annual statement of the commerce of the canals of our state which we publish in advance of the full statement, which we hope to take place in a few days. The few items we give will, however, be found of much interest, embracing as they do the most prominent point of the annual statements.

The receipts of flour, wheat and corn, which we publish, embrace the deliveries at Albany and West Troy; those at Waterford, which will increase the aggregates to but a small extent, not having been received at the department.

1847.

	Flour, brls.	Wheat, bus.	Corn, bus.
Albany,	2,376,675	1,296,625	2,995,568
West Troy,	1,575,047	2,600,951	3,025,576
Total,	3,951,722	3,897,576	6,021,144

1846.

The receipts of the same article, for this year, we give in the aggregate, not having the deliveries at the two points separate.

Flour, bbls	3,663,441
Wheat, bush	2,950,636
Corn, bush	1,610,149

These aggregates exhibit an increase in the several articles as follows:

Flour, bbls	888,281
Wheat, bush	946,940
Corn, bush	4,410,995

These figures will be somewhat increased by the statement from Waterford, but not materially.

The number of boats navigating the canals and registered on the 1st of January, 1847, was 2725; since then there have been registered 1492 boats, making an aggregate of 4217 boats. Taking 80 feet as the average length of each boat registered since January 1, 1847, and it will be seen that 22 miles of boats have been added, and the tonnage increased 110,000 tons at least.

The increase of the property coming to tide water has of course increased the tonnage transported and the value of property moved.

The tonnage of the property delivered at West Troy and Albany this year, is 1,708,933 tons, being an increase of 346,614 tons over last year. A similar rate of increase applied to the property going from the Hudson would give the up tonnage at 287,000 tons, and an aggregate of 1,995,933 tons.

The value of the property delivered from the canals at Albany and West Troy, this year, is $72,365,885, an increase of $20,869,730 over the value of the property delivered at the same points last year. Assuming that the value of property cleared from the Hudson this year has increased in like proportion, its amount would be about $93,000,000.—This would give an aggregate of $165,365,986, an amount greater by $18,820,347 than the value of the entire imports into the United States for the year ending July, 1847, and greater by 6,717,364 than the value of the entire exports."

Improved Manufacture of Rails.

We find the following article in relation to Mr. Thorneycroft's improved mode of manufacturing rails, in the London Mining Journal for June 12th. The editor of that useful Journal has examined the rails, broken to exhibit the condition of the bar when manufactured in the ordinary way, and by the improved mode, and the accompanying cuts are said to represent the condition of the iron. If the process of Mr. Thorneycroft will prevent the lamination or splintering of the rails, it is desirable that it should be introduced into all the rolling mills in this country, as well as in Europe, as this has been a source of serious anxiety to railroad companies. We shall look for further information in relation to it.

IMPROVEMENT IN THE MANUFACTURE OF RAILWAY RAILS.

Thorneycroft's Patent Anti-laminating Rail.

Among the difficulties which railway engineers have had to contend with, there has, perhaps, been none which has caused them greater anxiety than the lamination of the iron, of which the rails are formed, from their being piled and faggotted together, causing to splinter off on the face, on the passing of heavy trains, rendering them dangerous and useless in a short period after being laid down and entailing continual and heavy expenses. It has long been a subject of deep thought and serious consideration, how this lamination and splintering could be remedied; for as the traffic and the weight of the locomotive engine increases, the evil becomes still more serious, and alarming accidents have taken place from this cause.

Mr. Thorneycroft, of Wolverhampton, the eminent ironmaster, among many others, having been consulted on the subject, applied himself earnestly to its consideration and accomplishment; and, we are happp to say, has succeeded beyond his most sanguine expectations. Samples of the rails have been inspected by many of the most eminent railway and other engineers in the kingdom, all of whom have expressed their decided opinion of the complete success of the new manufacture.—One of them, a man of great eminence in his profession, having been to the works, and inspected the improved made of manufacture, pronounced it most simple and perfect, and the greatest improvement that has been made in the make of iron rails since railways have been known; and, to use his own words, "it must prove a great national benefit, and I hope the inventor will be amply rewarded for his trouble and enterprise." In the expression of this sentiment we most heartily concur.

We last week announced, in our list of patents, this invention; and we have since had an opportunity of closely inspecting parts of four rails, which had been broken to show the fracture of the iron at one end, while the other was polished, and an acid applied, showing all the laminæ, and every seam formed by the faggotting of the iron. The following diagrams will clearly show Mr. Thorneycroft's improvements:—

Fig. 1.

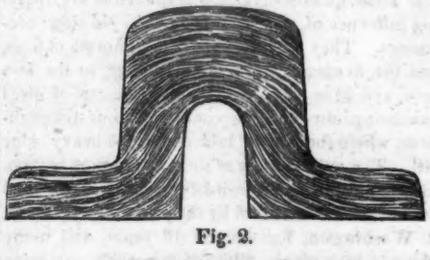


Fig. 2.

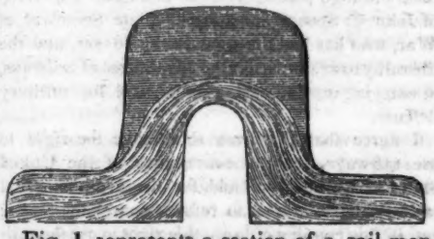


Fig. 1 represents a section of a rail manufactured on the old method, showing the lamination of the iron from top to bottom. Fig. 2 shows Mr. Thorneycroft's improvement, by which it will be seen that the part of the iron liable to wear away is *one perfect homogeneous body*, as much so as if it was cast-iron or cast-steel, still perfectly malleable as any other wrought or rolled iron, but, being jointless, is perfectly free from laminæ, and not liable to splinter off on the edges. We understand the rails are about to be laid down immediately at some of the principle stations on the larger lines, where the most severe trials will be given them. The inventor appears to be quite confident that the results will prove highly satisfactory; and, indeed,

in this there seems little difference of opinion among all who have inspected them—a few months, however, will decide, and, in the mean time, specimens may be inspected at our office.

We understand that Mr. Oliver Ames, of Falls Village, Connecticut, has patented a mode of manufacturing rails and tire, in which the "pile," or "faggot," is twisted before rolling, and by which operation the fibres of the iron are laid together like the strans of a rope, thereby preventing the mischief arising from lamination, as is intended by Mr. Thorneycroft in his plan above described; and we understand that the expense of giving the *twist* is so trifling, when the machinery is prepared, that it will cost very little more than when made in the ordinary way. We hope, ere long, to have a full description of this process of manufacture for publication.

Railroads in the West.

We find the following in the Chicago Democrat of Dec. 2d, in relation to the railroad projects in the West. It alludes, however, only to a part of those now in course of construction, and about to be commenced.

We have recently met with two of our friends, of the profession, going westward to take charge of works, one in Illinois and one in Indiana. That in Illinois, the Springfield, Jacksonville and Meredosia road has been purchased by a company in New York and eastward, and is to be under the charge of Mr. J. E. SHIPMAN, of New York; and that in Indiana, from Indianapolis to La Fayette, and thence on to the Lake, to connect with the road from Chicago to Detroit, and to Toledo, is, we understand, to be in charge of Mr. A. C. TWINING—both of whom have gone west to commence operations.

If these roads shall be constructed and brought into use within two or three years, others will also be undertaken, not enumerated in the following list:

The editor of the Democrat says:—"The gigantic railroad projects of the west, appear to move forward with rapid strides. The speculative time of 1836, projected the various routes, but it now remains for most of those routes which have since been looked upon as in a great degree chimerical, to be carried into operation. These roads will require a large amount of capital to complete them; but it may not be expected that all of them will be commenced upon immediately.

Commencing with the Canada road. If the two termini are made west, the capital required will be $6,000,000.

The road from Detroit to Port Huron, will require an expenditure of $700,000. Twenty miles of this line will be finished by July next.

The Michigan Central Road, now being completed, will expend at least $5,000,000, to connect with the Buffalo and Mississippi road, at the State line of Indiana.

Cost of the 65 miles of the Buffalo and Mississippi road from the junction of the Central road, to Chicago, $2,000,000. Cost of route from Chicago to Fox River, $500,000.

Road from Toledo, 67 miles to Indiana state line to intersect with Buffalo and Mississippi road, now let out to grade; estimated capital, $1,500,000.

The railway proposed, and which is to be carried into effect under charters from the states of Ohio, Indiana and Illinois, is to extend from a point opposite St. Louis, to Wheeling on the Ohio; passing over the route of the present national road, through Vandalia, Indianapolis and Columbia; the distance between St. Louis and Wheeling being 638 miles. Estimated cost at $20,000,000.

The road from Cario to the Illinois canal. The state has expended a million on this route and have recently abandoned it to a new company. It is supposed $2,000,000 more will complete it.

The several roads now building in Ohio, and to be commenced next spring, will require $3,000,000 more.

Here, then, is work laid out that will cost at least $42,000,000 at the West, to say nothing of sides lines, etc. The capital for them, however, does not equal the call of instalments for railroad purposes in England, during any two months within the past year At the east the projected lines will cost as much, if not more; so that in round numbers, $100,000,000 will be required to be expended the next three years in railways.

Of all those routes, we do not know of one which will cost so small in proportion to its length, or whose prospects of a remunerative return are as good, as the Galena and Chicago Union Railroad. Let this road be but completed to Fox river, and it will add twenty-five per cent. to the value of real estate along its route, and for miles, in the interior, from its termination."

The Postmaster General and the Railroads again.

In the Journal for December 4th and 11th, we had something to say in relation to the disagreement between the Postmaster General and the Richmond, Fredericksburg and Potomac Railroad Company.—It is not, and has not been our wish or intention to evince a fault finding disposition, nor to take sides with one party against the other; but we consider the subject one of such *growing* importance, not only to the people, but also to the general government, as well as to the *railroad companies*—that we consider it the right of the Journal to speak freely in relation to it.

The object, for which we suppose the Post Office was established, was the *accommodation of the people*, and therefore the Postmaster General, the "*foreman*" of the department, to speak technically or professionally, ought to employ the best "journeymen" within his reach, to accomplish the object in view, and to pay a fair price for the service rendered; and especially to pay for speed and certainty, in the transportation of the most important mails in the country, rather than to send one of them by a circuitous route of *three hundred and fifty miles*, of dangerous winter navigation, in 25 to 30 hours, because he can get it done for $97.10 a mile!—amounting only to $34,000 per annum, instead of sending it by the *direct* route, *one hundred and thirty miles* in *ten hours*, at a cost of $260 per mile, and the annual cost of $32,252!!

But the best way to place the subject fairly before the public is to give the last letter of Mr. Cave Johnson, which, in our estimation, is in much the same spirit and style of the village pettifogger, in a justice's court, rather than like the dignified counsellor in the court of last resort, at Washington—and also the reply of Mr. Edward Robinson, president of the railroad company, arraigned by the P. M. General—and we ask for both of them a candid perusal.

We also give, in this number, a communication from an old and valued correspondent, who is perfectly conversant with the great and growing interests of the country, the value of railroads and canals in developing those interests; and the importance of railroads in the transportation of the mails, troops and munitions of war, and the transaction of business. His opinions and recommendations are entitled to consideration and respect; and we therefore devote much space, in this number, to the subject, as we intend to send it to gentlemen of intelligence and influence in different parts of the country, in the hope of drawing such attention to the subject as will ensure the adoption of measures to prevent similar controversies hereafter. All we ask of the department is to allow liberal rates for, and only in proportion to, *speed and punctuality*; and then to require of the companies a *thorough* compliance with their contracts.

The letter of the P. M. General is as follows:

POST OFFICE DEPARTMENT, Dec. 20, 1847.

SIR:—In answer to the inquiries made in your letter, which was received to late on Saturday evening for reply, I have the honor to state—

That the price to be paid the bay line is $34,000 per annum, a distance of 350 miles—being less than $100 per mile, for taking the great southern mail to Petersburg, and for the supply of Richmond. The two-horse carriage conveyance from this city to Richmond and back, for local supply, costs $13,000—making in all $47,000.

The service superseded by these contracts cost as follows:

The railroad and steamboat service from this to Richmond	$32,252 00
Local supply between Norfolk and Baltimore and Norfolk and Richmond	9,200 00
Balance of service on horse-routes discontinued	305 00
Service between Richmond and Petersburg, to be discontinued	5,818 48
	$47,575 48

Difference between the old and new service, $575 48.

The lowest sum demanded by the company from this to Richmond was	$32,252
The sum offered by the department was	29,480
Difference	2,772

The demand of the company was $22 50 per mile per annum upon the railroad, which is 75⅔ miles long—more than the department was authorized by the acts of Congress to pay. The cost of the substituted service was no doubt greatly increased by the short notice given me by the company of their determination to throw off the mails, and by the undue advantage taken in compelling me to make this change in the winter. The refusal of the department to make an illegal contract has, however, resulted in a small saving on the route itself; and in a very large one, when the whole railroad service in the United States is taken into consideration.—Had I made such a contract, regardless of the acts of Congress, of the settled adjudications of the department, and the uniform decisions of all my predecessors—of everything, indeed, but the dispensation of President Tyler in favor of this particular com-

pany—what other railroads in the United States could have been denied a similar violation of law in its behalf, and a similar increase of pay? Or are such favors to be conceded only to those whose roads are, fortunately, located near the seat of government? Or to those who are bold enough, if the law is not bent at their dictation, to suit their interests, to wage a war of destruction upon the accommodation and rights of the public? I may here remark, that it is confidently believed that there is no railroad in the service of the department that cannot show greater hardships in its mail arrangements as a reason for increase of compensation, than the Richmond company.

On this road, the service is performed in the day; the hours suit its way travel, the connexion of its trains, and its connexions with other roads. To what extent my yielding to its demand would have probably increased the cost of mail transportation on railroads throughout the United States, it is difficult to estimate; but it is easy to see that it would have broken down all legal restrictions, and deranged the system of compensation established under the law.

The time allowed the bay line for the delivery of the mail in Richmond is twenty-five hours—that is, from 11 o'clock, P. M., until 12 the next night. The local mails from this city to Richmond in two-horse carriages, by Fredericksburg, are twenty-three hours—that is, from 6 A. M. each day until 5 A. M., the next day.

The mail from Petersburg going south is to depart upon the arsiual of the boats, but not to delay later than 12 o'clock P. M., for their arrival. Under the former arrangement the mail departed at 9½, P. M., from Petersburg by the summer schedule, and 3½ P. M., by the winter. The delay in the departure from that place is, however, overcome by an engagement on the part of the contractors to expedite over their routes, so as to make the time of arrival at Charleston the samo as on the summer schedule. It is confidently believed that, when the bay line is properly regulated, as it soon will be, the departure from Petersburg will be made at an earlier hour. The bay route does not furnish so satisfactory service as the Richmond railroad. But I was obliged by the Richmond Railroad Company itself to place the great southern mail on some other route. They refused, utterly, to take it over their road from and after the 10th of December, unless I would make with them an illegal contract—unless I would stipulate to pay them a compensation forbidden by law.

The exacting spirit of monopolies could not display itself in a more despotic form than is exhibited in this case. The opinion of the officer, whose duty it is by law to interpret as well as execute this law—the decisons of his four immediate predecessors, sanctioned and confirmed as they were by the acts of 1839 and 1845, and acquiesced in by this very company from 1839 to 1843, are all set aside and disregarded, and the sum of $2,772 more than could be paid insisted on before the public could be accommodated.—And this is followed up by a refusal even to continue the service at the very high price offered—for the accommodation and convenience of the very people who gave existence to the corporation, and who are so deeply interested in its successful management, until Congress could review the law, and settle its construction.

So anxious was I to have the service continued on that road, that I not only offered them the maximum price ($237 50 per mile) for single daily service, but I consented, upon the application of others, to permit the service to be continued, without contract, as had been the case for many months before, so as to give the company time to apply to Congress for an exposition of the laws, or for an increase of pay; but this was declined by their president. The service on this road is once a day. The service between this city and New York is twice daily, and the pay averages 150 dollars per mile per annum, and for single daily service. For the service on the roads between New York and Boston, and Albany and Buffalo, the pay averages less than 100 dollars per mile. On other roads, less favorably circumstanced, having heavy mails to convey, and but little travel, and compelled to perform the whole service in the night, the sum of $287 50 per mile is the highest price paid for single daily service. When these circumstances are considered, if there had been no legal restrictions on railroad pay, I can see no justification for giving a higher price for mail transportation over the Richmond road. Nor can I readily believe that the citizens of Virginia themselves, owning, as I understand, two-fifths of the stock of this road, would jusify me in yielding to the exactions of this company a greater price than is paid on the roads in the other States of the Unios.

I am, respectfully, your obedient servant.

C. JOHNSON.

Hon. W. L. Goggin,
Chairman Com. P. O. and P. Roads.

In reply to Mr. Johnson's letter which appeared in the Union of the 20th, the following appeared in the same paper on the 22d.

We ask attention to the reflection of Mr. Johnson, against the company, when speaking of "*the short notice given me by the company of their determination to throw off the mails, and by the undue advantage taken*," &c., and then to Mr. Robinson's statement in relation to the same point, in the 4th paragraph of the following letter.

To the Editor of the Union:

BROWN'S HOTEL, Washington city,
December 22, 1847.

SIR: In your paper of yesterday I observe that the Postmaster General makes out a strong case in behalf of the department against the steamboat and railroad companies between Washington and Richmond; but I believe that you have lived long enough to know that, more frequently than otherwise, there are two sides to a case, and that the worse may often appear the better cause, if an advocate is allowed to stray from the facts and abandon the record.

The facts of the present case are simply these: In 1843 there existed, under a joint resolution of Congress, a contract between the steamboat company and the department for the transportation of the mail between Washington and Aquia creek at the rate of $12,752 per annum, to continue until 1st July, 1847. At the same time, there being no contract, and none likely to be made between the railroad company and the department, Mr. Tyler, then President, was selected by the parties to arbitrate the matter. His decision gave the company the sum of $19,500 (about $260 per mile) for the transportation of the mails one year between Acquia creek and Richmond. At the expiration of this term—say on the 1st July, 1844—the mail was continued on the route for the same compensation, and was so continued until 1st July last, when proposals were issued for the service between Washington and Richmond. At this letting, a bid was made by the railroad company for the entire route from Washington to Richmond, of $36,500 per annum; and, although no other offer came from any quarter, it was rejected by the department. A proposition was then made by the same company, that, at the mutual pleasure of both parties, the mail should be continued on the route for the compensation previously paid, which amounted to the sum of $32,252 in all, per annum, which sum will show a surplus of but $1,377 over what the route of 130 miles, (nearly 131 miles,) at $237 50 per mile, would amount to, and which surplus is not sufficient to defray the expense of transporting the mail when delivered in Washington, Alexandria, Fredericksburg, and Richmond. This proposition was likewise rejected by the Postmaster General, who insisted upon the sum of $2,985 less than the amount named.

Under the impression that the opinion of eminent legal gentlemen, entertained in common with the first officers of the government, when maturely considered by the Postmaster General, might induce him to reconsider his decision, and anxious to avoid the inconvenience and disorder which would result to the department by a contrary course, the companies proposed to continue the service, and rely on the justice of the department to award them a fair compensation.

Finding, at the expiration of one quarter, that the views of the Postmaster General had undergone no change, and unwilling to encounter the expenses incident to a continuance of their service at the most expensive season of the year, when to the hazards of night service on the river were to be added the expenses of an extra train on the railroad portion of the route, the directors unanimously resolved no longer to continue the transportation of the mail after 10th December following. This decision was made known to the Postmaster General early in October, though no formal notice thereof was given until the twenty-sixth; because the Postmaster General had stated that a notice of ten or twenty days only was neaessary to enable him to perfect other arrangements.

With what reason, then, can the Postmaster General find fault with the course of the

companies? He was aware of their dissatisfaction with his views of the laws which related to their compensation; and knowing that reliance was felt upon a change of his opinion, it was his duty, when certain that that opinion would undergo no change, to take such course as seemed to him best under the circumstances, and not rely upon the continuance of service liable any moment to disruption. The impression has gone abroad, that the companies on the route exact not only an illegal compensation, but one greatly exceeding a fair proportion for the use of their route.

In regard to the first objection, no lawyer, whose opinion is worth much, has yet been found to concur with the Postmaster General in his construction of the laws which relate to railroad and steamboat compensation for mail-service; and, as regards the latter impression, I need only refer any disinterested mind to the peculiar characteristics of the steamboat and rail route between Washington and Richmond to satisfy such, that if the maximum of the law, "$300 *per mile for one or more daily mails*," is allowed the companies, it will not realize to the stockholders that fair and just proportion of their income which ought to be expected from the government.

In the first place, the largest daily mail in the United States is taken both ways over it. It traverses a country which offers but little support in the way of local travel or freight, and that little which is derived from the steamboat portion of the route is almost totally surrendered to the necessity of a rapid transportation of the mail. It saves to the department 15 hours beyond any route, or mode of transportation, which it can adopt, and thus will be enabled, in the absence of any contract for the mail, to obtain, through the transportation of express packages, (which are fast taking the place of the mails,) a compensation more than equivalent to any income which can reasonably be expected at the hands of the department. Finally, the service performed for the department is equal to one-third of the whole service done on the route; for the fact of no freight being transported on the steamboat portion of the route, none between Acquia creek and Fredericksburg, and but one train per week between Fredericksburg and Richmond, makes it necessary to look to the transportation of the mail and passengers almost entirely for the expenses of the route, and a very moderate dividend for the stockholders. Of this service the department has received a proportion of one-third, whilst the compensation received from it is not one-tenth of the income on the route.

I am pleased that the merits of railroad service, in connexion with the government, have a fair chance of being canvassed by the public. The great benefits which have resulted from a reduced system of postage are, I believe, now generally acknowledged, as well in this country as in Great Britain. In both countries the reformation has been simultaneous. Can any one doubt that this immense tax, under which the public so long groaned, would ever have been lightened, but for the aid of railroads? Certainly not, so far as our widely-extended country is concerned. What is the result to the revenues of the Post Office Department? A largely increased income, and the flattering hope, advanced by the Postmoster General, that the period is not distant when a further reduction may be expected of that tax which now weighs but as a feather on the community. To the railroads of the country, and to no other cause, can these incalculable benefits be traced. They have been able and efficient agents in the greatest reformation of the age; and, like all reformers, have met but scoffs and derision. No portion of the vast good which has accrued through their means to the department has enured to them; for their compensation has not increased one cent, whilst their labors have been quadrupled.

Is it, to say the least, poli-ic on the part of the government, under such circumstances, to ask or receive of the companies, engaged in the transportation of the great mails of the country, an ungracious service? Is it not rather best to encourage, by liberal laws upon the subject, the construction of important railroads, the cost of which (as Mr. Spencer, formerly Secretary of War, so justly remarked, in his report to Congress) "is as much actually added to the defensive means of the nation, without any expense to the general government."

I cannot conclude without some reference to the *balance sheet* of the Postmaster General, attached to his statement of yesterday. To make up the sum which is requisite to show that for service fifteen hours longer than the old, he pays no more, the mail-pay for the route between Richmond and Petersburg, (never yet stopped) is abstracted, without the information on his part as to how this mail is to be transported in future, or whether it is to be taken between the two places at all. The latter idea is the most plausible, as a northern editor has already advanced the opinion that Mr- Johnson expects to reduce the cost of mail transportation by breaking up the mail-routes of the country to an equal extent. Mr. Johnson's mode of getting more mail service for reduced pay, is strongly exemplified in his contract by the Bay, where he expects to obtain 350 miles by water for the same money which obtained for him only 150 by land.

I shall now conclude with the remark, that the directors of the companies between Washington and Richmond, having carefully weighed this matter, have, on consultation with a majority of their stockholders, (among which is the State of Virginia. through her board of public works,) resolved, unanimously, that they will no longer furnish increased service for diminished pay; and doubt not, when the public learn, as they now do, that the companies were willing to continue their service till a reasonable time, in view of the action of Congress, provided the Postmaster General had been willing to apply for an explanation of the laws on the subject, that the public voice will sustain them in the course which they avhe thought proper to pursue.

I remain, very respectfully,
ED. ROBINSON,
President Richmond, Fredericksburg, and Potomac Railroad Company.

Intercommunication between the Atlantic and Pacific Oceans.

DEAR SIR.—An article in your estimable Review for July, from Professor Forshey, of Louisiana, on the subject of a railroad to the Pacific, seems to call for some remarks from me, as it directly alludes to and compares my project with one for a more southern route.

When I first gave my undivided attention to the subject of a communication across our continent, and long before my proposition of 1844 was made public, I examined the whole continent, as far as its topography was known, from Panama to the Arctic ocean.

First. It appeared that the more narrow points, the shortest distance across, would be the most desirable, therefore Panama and all the Isthmus of Mexico claimed my attention. The first object in such a work being to change the route for the commerce of Europe with Asia so as to benefit ourselves, on examination, I found it could not be done here: because, if a ship canal were constructed *anywhere* it could only be done by a tunnel through from ocean to ocean, the practicability of which is very doubtful, and under any circumstances at an enormous expenditure, probably doubling any, the highest estimate yet made. A railroad could not answer, because there is not sufficient water on either side, nor on the entire Gulf coast, to form suitable harbors for ports of depot; because the mountain torrents in the rainy season would be likely to sweep away the work or render it useless; because the climate is such that population could not be sustained either to build the work or to carry on the commerce, make the transhipments, etc., etc.; because the expenses of such commerce would be greatly increased beyond what they now are, and because the time and distance would be increased, as, for instance, take the proposed canal at Nicaragua:

From London to Valparasia, through the proposed canal to Realijo	5.478 miles.
Thence to Valparaiso	3.500 "
	8,978 "
From London to Valparaiso around the Cape	9,400 "
Difference in favor of canal, which would not change route	422 "
From Sidney to England, via proposed canal	14,848 "
From Sidney to England, via Cape Horn	13,848 "
Against canal	1,000 "
From Canton to England, via canal S. W. M.	15,558 "
From Canton to England, via Cape Good Hope	14,940 "
Against canal	618 "
From London to Singapore, via canal N.E. M.	16,578 "
From London to Singapore, via Cape Good Hope	14,350 "
Against canal	2,228 "

Comment is unnecessary.

This abandoned, I followed up the continent. I did not consider the difficulties of getting a right of way through Mexico as an impediment, because interest always governs; but I have not yet been able to find any place for a route on all the continent, above the Isthmus and below 42½° north latitude, where a passage can be had short of an elevation of about 12,000 feet, and I did and do consider any route off from our territory an insurmountable objection. Any southern route must be subject to almost or quite insurmountable difficulties, from immense soft bottom lands, impossibility of bridging streams, and the constant yearly flooding of the Rio Grand and all the streams to be crossed, which would destroy any railroad and its operation.

These are difficulties which must stare any engineer full in the face, and there is no way to overcome them. Then, as to climate, the same insurmountable difficulties as across the Isthmus. Can commerce be carried on through Louisiana and Texas, except in the winter months? and would Mazatlan, 23¼° north latitude, worse even than at 7° or 10° in climate, from its position and country,* answer for the great emporium for *all* the commerce of Europe with all Asia? And can our animal and vegetable products be carried in safety through such a climate? Could we by such a route expect to avail ourselves of the vast markets of Japan, of China and of all Asia, which would be opened to us by a proper route across our continent? My own experience in such climates tells me we could not; and the distance from Europe could not be shortened by this route sufficiently to force a change, as will be seen—

From London to Charleston, 80 degrees long, each 47 miles	3,760 miles.
From Charleston to Mazatlan, Mr. Forshey's route	2,170 "
From Mazatlan to Canton, 140 degrees long, which on this parallel of the globe with currents and trades, may be estimated at 60 miles each,	8,400 "
	14,330

Subject, certainly, to no less than 1 cent per ton weight per mile, on 2,170 miles, is $21 70 or $10 85 per ton measurement of teas, or the like merchandise; subject to transhipment at Charleston, transhipment or ferriage across the Mississippi, the Rio Grand, and other streams which cannot be bridged, and we see we gain in distance from Canton to London only 610 miles. Comment is unnecessary here.

I have examined this subject and devoted myself to this object, not for a Northern or Southern route, not for New Orleans or New York, Boston or Charleston; not for any place or city, but for the whole United States—for *all*, from the Pacific to the Atlantic, and from the Gulf to Maine. My object has been to find a route, the means for accomplishing which should be produced by itself—a route which, by shortening distance and time, lessening expense, affording facilities for commerce and intercourse, would give us the entire control of the commerce of Europe with all Asia, and increase our own far beyond the power of the imagination to estimate, and at the same time spread and distribute its vast, its incalculable benefits, over every section and interest of our widespread republic; and I think an impartial examination of the subject, in all its bearings, will plainly show that I have not failed. I base all my calculations upon the only possible means, the wilderness land, by which the work can be accomplished at all on any route; therefore, the route must be where the road can bring into life and action this *only* means; and the route which circumstances forced me to select is the only route which will do so.

From Lake Michigan to the pass in the Rocky mountains, as will be seen by the accompanying map, No. 1, is unquestionably the best and most feasible route for a railroad on the face of the globe—without rock, mountain, or even hill; no wide, soft bottom lands, no streams which cannot be bridged, and no flooding of the streams to destroy the road or impede its operation; one half this distance the route is parallel with and between rivers, and does not require a single bridge—the whole distance on a regular gradual ascent, a great part of which not over 6 feet per mile, and no one mile over 25 feet. From the pass to the ocean, from the scale of elevations taken daily by Col. Fremont, it will be seen that the route is not a difficult or expensive one. It would seem that the God of nature had fixed this as the route. As the Red sea in olden times, so here the mountains are opened for our passage, that we may carry light, life and liberty to the darkness and heathenism of all Asia; and the same God who commanded the Israel of old has pointed out to us, the young Israel, the way, given us the means to accomplish his great purpose, and shown that we are his instruments to encircle the globe with the spirit of life and truth. The application of man's labor with a rich reward, will bring forth and accomplish all.

It will be seen by the accompanying map, No. 2, that on this line, this belt of the globe, are nearly all the population and commerce of the world—the most genial climes and fertile soils—producing the greatest amount of breadstuffs and meat, the sustenance of both man and commerce; and by examination of the map it will be seen that this is the most central, most convenient and accessible to all the Atlantic and gulf cities; the southern cities have advantage in distance—Philadelphia 100 miles nearer than New York; Baltimore 100 miles nearer than Philadelphia; Richmond nearer than either; Charleston nearer than New York, and New Orleans in a line by which a railroad can be built not 800 miles from it. And we now see all the states, from the gulf to Maine, pushing with all possible force *all* their roads to this very point, in order each to share in the rich commerce of that immense population which is to occupy those incomparably rich and overwhelmingly productive states north and west of the Ohio river.

South Carolina, Georgia, and Tennessee are straining every nerve to approach the mouth of the Ohio. Virginia yet slumbers, but she will awaken to the rich prize within her reach, and push on to Cincinnati. Baltimore, impatient for the race, will not be checked even by the mountain barriers, but leaps on to Wheeling, the first to take the purse. Nor will Philadelphia or New York be inactive; on, onward, is the cry of all for the rich prize beyond the mountains. And if such be the inducement now, what may we expect when the great highway of nations is before them all, from which each must receive its proper share of all the commerce—all the wealth of the world? At the same time there will be brought into life and use an immense country—the richest and best on the globe—embraced within the routes from each Atlantic city, and from ocean to ocean, as will be seen by the annexed map, No. 2. Our vast republic will be brought to the grand centre in two and a half days, and the entire world to the same centre in twenty-five days: making the distance from any Atlantic city to Oregon or California not over 3,000 miles—at 30 miles per hour, requiring less than five days; thence to Japan, but 4,000 miles, by steam, but fourteen days; to Shang-hai in China, at the mouth of the great Yang-tse-Keang, which at a short distance from its mouth crosses the great canal to Pekin, and where all the commerce of this vast empire of 500,000,000 souls now centres, and where all its foreign commerce must centre, when this route is opened, would be from New York but 8,400 miles, requiring 24 days; to Australia, 9,000 miles, requiring 26½ days; to Singapore, where all the commerce of Europe with India would centre, with this route open, is but 10,660 miles, requiring but 29½ days; and all this commerce and intercourse by this route might be carried on by steam, because there is an abundance of coal at Vancouver's Island, at Japan, China as low as Formosa, and the high latitudes of Australia, and the distances from point to point are within the capacity of a vessel to carry fuel, which could not be done from Mazatlan or the Isthmus. The commerce and intercourse from this route with all Asia, and even to Africa, may be carried on along the coast, never ought of sight of land. What a prospect, what a glorious prospect! Very soon the various lines of steamers from the Oregon to Japan, to China, to all the islands, and to all Asia, would far outnumber those of any of the Atlantic cities of the present day.

In Mr. Forshey's 1st comparison, he says: "Connection between the Pacific and Atlantic at any of the points named, Memphis or South, will answer all the purposes for the entire valley, as the navigation to and from these points is never intercepted." In this I cannot agree with him; the Ohio certainly drains a very important part of that valley. The Herald of the 3d inst. says, navigation of the Ohio river was,

* Its coast is subject to periodical gales, so severe as to render it extremely dangerous, if not impossible, of access, at certain times.

This Map shews the position
Europe and Afrira on one sid
in the centre Europe 3000 m
250.000.000 and Asia on the o
with a population of more tha
our Continent will make
both.

ARCTIC OCEAN

SIBERIA

R. Lena

Riv. Obe

Gulf of Obe

Riv. Yenisei

Riv. Ousa

Lena

Obi

Irtish

Sea of Okotsk

Aleutian Islands

Behring's Strait

Irtal Sea

TARTARY

CHINESE EMPIRE

R. Songari

R. Saghalien

Gulf of Tartary

The population of Japan is estimated at not
below 50.000.000 and as high as 250.000.0
its annual commerce estimated at $200.000.000

4200

4000

4000

Pekin

Hong Ho

Sea of Japan

NIPON

Japan

TIBET

CHINA

Nankin

Chang Hae

Amoy

T'chuson

Hong-tchon

Islands of Japan

6200

6400

6340

3240

6340

Burampooter

Indus

Ganges

Yang Tse Kiang

Canton

Formosa

HINDOOSTAN

Calcutta

Macao

Hainan

Sea

Ladrone Is.

Sandwi

Arabian Sea

Bay of Bengal

Straits of Malacca

Philippine Islands

China

3840

Ceylon

1320

6320

The pop
than 500.000.0
contain more
lels of 22 and
parallel of 40,

Borneo

Sumatra

Singapore

New Guinea

INDIAN OCEAN

Friendly Islands

Society

AUSTRALIA

Route to China

18000 miles

NEW ZEALAND

S

O

Nº2

position of our Continent as compared with
ne side and Asia on the other, placing us
000 miles from us with a population of
the other side about 5000 miles from us
e than 700.000.000 The Rail Road across
ake us the centre and thoroughfare for

The population of China, from all authentic accounts, cannot be less
500.000.000, all above the parallel of 22; so that China and Japan together
in more than half the population of all the world all between the paral-
f 22 and 50, while the population of Europe, is we may say all above the
llel of 40, placing the population of all the world on nearly the same belt.

Baffin's Bay
Davis' Strait
Iceland
Russian America
Mc Kenzies R.
Hudson's Bay
NORTH AMERICA
Vancouver I.
Columbia Riv.
Winnipeg L.
Superior L.
Michigan L.
Huron L.
Erie L.
Ontario L.
St. Lawrence
St. John
Halifax
Boston
New York
Philadelphia
UNITED STATES
Missouri
Mississippi
Ohio
Platte
Kansas
St. Louis
Arkansas
Canadian
Red
Colorado
Gila
Rio Grande del Norte
Charleston
Savannah
Bermudas
New Orleans
MEXICO
Gulf of Mexico
St. Domingo
Jamaica
Cape Verd Is.
NORTH ATLANTIC
Azores
Strait of Gibraltar
Madeira
Canary Is.
PACIFIC
San Francisco
2160
Sandwich Islands
Bay of Panama
SOUTH AMERICA
Pernambuco
Ascension
Low Islands
Society Islands
Rio Janeiro
SOUTH PACIFIC
Valparaiso
Buenos Ayres
SOUTH ATLANTIC
Falkland Is.
I. Georgia
Cape Horn

This Map was prepared by Mr Whitney for Mr Breese's report to the Senate, U. S. 29 Congress.

Nº2

iews the position of our Continent as compared with
ira on one side and Asia on the other, placing us
Europe 3000 miles from us with a population of
l Asia on the other side about 5000 miles from us
n of more than 700.000.000 The Rail Road across
t will make us the centre and thoroughfare for

Baffin's Bay

Davis' Strait

Hudson's Bay

Russian America

Mc Kenzies R.

Bhering's Strait

N O R T H A M E R I C A

Winnipeg L.

Vancouver I.

Columbia Riv.

4200

4000

4000

3240

6340

2160

3840

P A C I F I C

San Francisco

Sandwich Islands

Missouri

Platte

Kansas

Arkansas

Red

Canadian

Rio Grande del Norte

Colorado

Gila

St Louis

U N I T E D S T A T E S

New York

Philadelphia

Boston

Halifax

St John

St Lawrence

Superior

Michigan

Huron

Ontario

L. Erie

Charleston

Savannah

New Orleans

Bermudas

MEXICO

Gulf of Mexico

St Domingo

Jamaica

Box of Panama

S O U T H A M E R I C A

Valparaiso

Buenos Ayres

Rio J

Falkland Is.

I. Georgia

Cape Horn

NORTH

The population of China, from all authentic accounts, cannot be less than 500.000.000, all above the parallel of 22; so that China and Japan together contain more than half the population of all the world all between the parallels of 22 and 50, while the population of Europe, is we may say, all above the parallel of 40, placing the population of all the world on nearly the same belt.

Low Islands

Society Islands

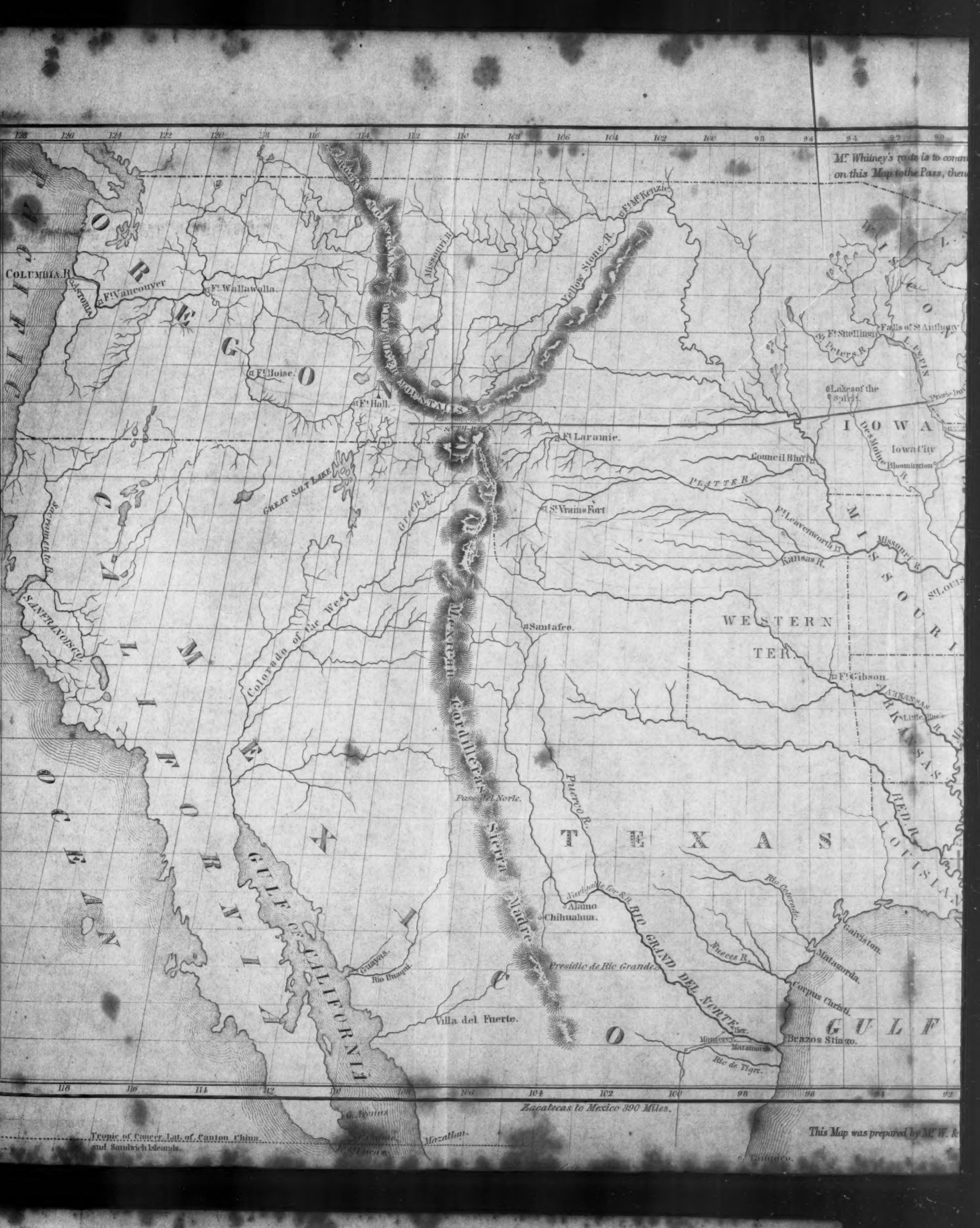
S O U T H P A C I F I C

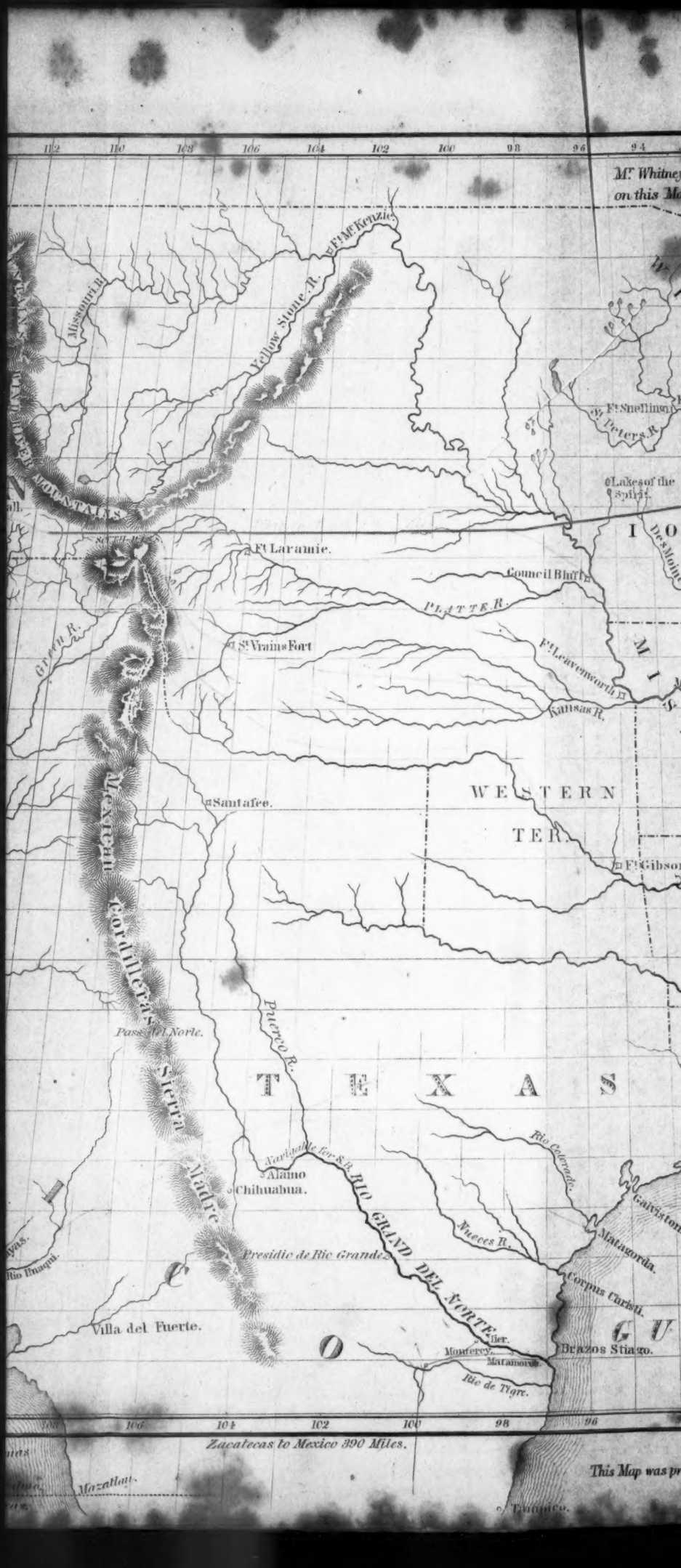
This Map was prepared by Mr Whitney for Mr Breese's report to the Senate, U. S. 29 Congress.

Spitzbergen
Iceland
NORTH ATLANTIC
White Sea
Archangel
R. Dvina
G. of Bothnia
St Petersburgh
R. Volga
Kama
Moscow
EUROPE
Baltic Sea
Elbe
Oder
Vistula
Berlin
Rhine
Paris
Loire
London
IRELAND
SCOTLAND
ENGLAND
Vienna
Dnieper
Odessa
Tanais
Danube
Constantinople
Black Sea
Caspian Sea
Azores
Tagus
Strait of Gibralta
Algiers
Mediterranean Sea
PERSIA
Madeira
Canary Is
ARABIA
Persian G.
Red Sea
AFRICA
Cape Verd Is
Pernambuco
Ascension
St Helena
Rio Janeiro
MADAGASCAR
SOUTH ATLANTIC
Cape of Good Hope
I. Georgia

Miller's Lith. 102 Broadway, N.Y.

126
48
46
44
42
40
38
36
34
32
30
28
26
24
COLUMBIA
SACRAMENTO R.
SAN JOAQUIN R.


Mr. Whitney's route is to coun
on this Map to the Pass, then
OREGON
CALIFORNIA
NEW MEXICO
TEXAS
WESTERN TER.
IOWA
MISSOURI
ARKANSAS
LOUISIANA
GULF OF CALIFORNIA
PACIFIC OCEAN
GULF
Columbia R.
Ft Vancouver
Ft Wallawalla.
Ft Boise.
Ft Hall.
Ft Laramie.
Ft St Vrains Fort
Ft Leavenworth
Ft Gibson.
Santafe.
Alamo
Chihuahua.
Presidio de Rio Grande
Villa del Fuerte.
Brazos Santiago.
Matagorda.
Galveston.
Corpus Christi.
Monterey
Matamoras
Rio de Tigre.
Rio Grande del Norte
Pass del Norte.
Sierra Madre
Rocky Mountains
Missouri R.
Yellow Stone R.
Ft M.Kenzie
Falls of St Anthony
Ft Snellings
Peters R.
Lake of the Spirit.
Council Bluffs
Iowa City
Bloomington
Des Moines R.
Platte R.
Kansas R.
St Louis
Arkansas R.
Red R.
Great Salt Lake
Green R.
Colorado of the West
Sacramento R.
San Francisco
Puerco R.
Rio Colorado
Nueces R.
Guayas.
Rio Huqui.
Mazatlan.
Tropic of Cancer. Lat. of Canton China and Sandwich Islands.
Zapatecas to Mexico 390 Miles.
This Map was prepared by Mr W. &
118 116 114 112 110 108 106 104 102 100 98 96 94 92
128 126 124 122 120 118 116 114 112 110 108 106 104 102 100 98 96 94 92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Mt. Whitney
on this Me
Ft. M.Kenzie
Missouri R.
Yellow Stone R.
ROCKY MOUNTAINS
Ft Snelling
St Peters R.
Lakes of the
Spirit.
Ft Laramie.
Council Bluffs
PLATTE R.
Green R.
St Vrains Fort
Ft Leavenworth
Kansas R.
Santafee.
WESTERN
TER.
Ft Gibson
Mexican Cordilleras
Sierra Madre
Pass del Norte.
Puerco R.
TEXAS
Rio Colorado
Navigable for S.B.
RIO GRAND DEL NORTE
Alamo
Chihuahua.
Galveston
Matagorda.
Nueces R.
Presidio de Rio Grande
Corpus Christi.
Rio Hnagra.
Villa del Fuerte.
Monterey.
Matamoras
Brazos Stiago.
Rio de Tigre.
Zacatecas to Mexico 390 Miles.
Mazatlan.
This Map was pu
Tampico.

Mr. Whitney's route is to commence somewhere between Green Bay & Milwaukie, cross the river near Prairie du Chein, follow nearly the line on this Map to the Pass, thence to Oregon or San Francisco, as may be most desirable.

Drawn and Engraved by C.H. Throop Washington D.C.

This Map was prepared by Mr. W. & published with his memorial to the Senate in first Sess. 29th Congress.

Places.	Time.	State of Water.
Louisville.....	August 29....	4 feet 3 inch. falling.
Wheeling.....	September 1...3	" 6 " "
Pittsburgh.....	" 1...3	" "
Cincinnati.....	August 25....	4 " "

and we believe it is well known that the falling continues through the autumn, with no expectation of any material improvement till February; that the water is often much lower than at present—it has been represented to me as low as 15 inches. Now we all know that at the present stage navigation is rendered difficult and expensive, and not equal to the wants of the country. Surely the Mississippi, from the Ohio to St. Louis, even, cannot be considered equal to answer all the purposes wanted; and as we ascend either the Mississippi or Missouri the difficulties increase, so that for the greater part of the year these streams may be considered useless. These are facts known to all who are acquainted with the commerce and intercourse of that great valley, and that the streams generally are now used as a matter of prime necessity, but so soon as the means can be obtained, they will be abandoned for railroads.

Mr. Forshey in his 2d comparison says: "That from the Mississippi, where he proposes his terminus, to Mazatlan, is not more than 1,500 miles; whereas Mr. Whitney's route is 900 miles greater." Now let us see if this be so; first we should ascertain where we set out from to get to Mr. Forshey's starting point on the Mississippi, and from thence where to go.

First I will correct some errors which have been published to the world, which appear in Mr. Breese's report, and have originated from my having taken the various estimates of different travellers without calculation or approach to certainty. In Mr. Breese's report the distance from the lake to the ocean is estimated at 2,630 miles, and from the lake to the Atlantic estimated at 1,000 miles; while we find the city of New York in the meridian of 74° west from Greenwich, and the mouth of the Columbia 124°, giving 50° of longitude from point to point, which on this parallel do not measure over 47 miles to the degree, making from ocean to ocean only 2,350 miles. From the measurement and calculations of Mr. Darby, so well known and justly celebrated for his calculations and statistics, it appears that on the curve of 30° north latitude, starting near St. Augustine, over New Orleans, Louisiana and Texas, over Sonora and to the Pacific, at or near Cape Gonzalo, is a range of 35° of longitude, which in that latitude, he says, equals nearly 2,100 statute miles; on the curve of 35° north latitude commencing near Ocracock inlet, south of Cape Hatteras, through North and South Carolina, through Georgia, Alabama and Mississippi, to the river about 10 miles south of Memphis, thence about 100 miles below Santa Fe, and over the spine of the Rocky mountains to the Pacific, near Cape Guadaloupe, over a range of 46° of longitude, which in that latitude is equal to 2,542 statute miles; on the curve of 40° north latitude, commencing at Tom's river, Monmouth county, New Jersey, passing near Philadelphia, Wheeling, Virginia, Columbus, Ohio, through Indiana, northern part of Missouri, then over the chain of the Rocky mountains to the Pacific, near Cape Mendacino, through 51° of longitude, equal in that latitude is nearly 2,700 statute miles. Again, on the curve of 45° north latitude, near the mouth of the River St. Mary, Nova Scotia, through Maine, New Hampshire, Upper Canada, Michigan, Iowa, and on over the Rocky mountains to the Pacific, south of the Columbia river, a range of 63° of longitude, which in that latitude is equal to a little over 3,000 statute miles.

I will now show the distances from the different Atlantic cities to Prarie du Chien, where the Pacific road would probably cross the Mississippi, and where all would join it.

First, from New York to Lake Erie, 78½° W. long., as per railroad report.	488 miles.
Thence to Prairie du Chien, W. long. 90½°, is 12° long.; but add 2° for detour, and it is 14° long	653 "
	1,141 "
And Boston would be 200 miles more, and Philadelphia 100 miles less distant; and Baltimore, as per railroad report, to Wheeling	384 "
Thence to Prairie du Chien on nearly a direct line, but allow for detour, etc., say	564 "
	948 "
From Charleston to Chattanooga	430 "
Thence to Natchez, Mr. J. E. Thomson's survey	152 "
Thence to the Ohio, 100; but add 15 for detour	115 "
Thence to Prairie du Chien on a line.	370
Add for detour, etc.	30—400 "
	1,097 "
From New Orleans on a line, 13° latitude, at 60 miles, is	780 "
But add for detour	50 "
	830 "
Now, from Prairie du Chien, 90½° W. long., to the pass in the Rocky mountains, 109½° W. long., is 19° long., each 47 miles	890
Here a road may be constructed in a straight line, but allow for detour.	50—940 "
From the Pass to the Pacific, long, 124° W., is 14½°, each 47 miles.	682
Allow for detour, etc.,	200—882 "
From Prairie du Chien to the ocean.	1,822 "

Thus, then, it appears that by the southern route it would be

From Charleston to Vicksburg	771 "
Thence to Mazatlan	1,490 "
From Charleston to Mazatlan	2,261 "
Thence to China, 140° long., is	8,400 "
From Charleston to China, southern route	10,661 "

And by the northern route, as before stated,

From Charleston to Prairie du Chien	4,097
Thence to Oregon	1,822
From Charleston to the Pacific.	2,919
Thence to China, 110½° long., on this parallel equal to	5,400
From Charleston to China, northern route	—8,319 "
Difference in favor of northern route	2,342 "

And the following table will show the distances from all the principal Atlantic cities and New Orleans to China by both routes:

A Table, exhibiting the Distances from all the principal Atlantic Cities (with New Orleans) to Charleston, to Vicksburg, to Mazatlan on the Pacific, and to China, for the southern route; and to Prairie du Chien (near where the Pacific road would cross the Mississippi), to Oregon, to the Pacific, and to China—with amount of difference both to the Pacific and to China.

	Southern Route.				Northern Route.			Dif. to Pac		
	To Charleston.	To Vicksburg.	To Mazatlan.	To China.	To Prairie du Chien.	To Oregon Pacific.	To China.	In favor of S. route.	In favor of N. route.	Difference to China in favor of N. route.
From Charleston	....	771	2,261	10,661	1,097	2,912	8,319	658	....	2,342
" Richmond	427	1,198	2,688	11,085	950	2,779	8,172	86	....	2,917
" Washington	551	1,325	2,815	11,215	988	2,810	8,210	....	5	3,005
" Baltimore	594	1,365	2,855	11,255	948	2,770	8,170	....	85	3,085
" Philadelphia	709	1,480	2,970	11,770	1,041	2,863	8,263	...	107	3,507
" New York	796	1,567	3,057	11,457	1,141	2,963	8,363	...	94	3,094
" Boston	996	1,767	3,257	11,657	1,341	3,163	8,563	...	94	3,094
" New Orleans	....	415	1,905	10,305	830	2,652	8,052	74	...	2,257

And as the principal interior cities and states have a very important interest in the matter, let us show them exactly where they will stand; in order to do which, we will continue the table of comparison. And as Mr. Forshey says "they are suitable to all purposes," I will in most cases take the river distances for the southern; but as the building of the northern route will open railroad communication to almost all the places named, the railroad distance will be taken in most cases for that route.

From Louisville	....	1,001	2,491	10,891	430	2,252	7,652	....	239	3,239
" Cincinnati	....	1,132	2,622	11,022	450	2,272	7,672	....	350	3,350
" Wheeling	....	1,496	2,986	11,386	560	2,382	7,782	....	604	3,604
" Pittsburg	....	1,588	3,078	11,478	610	2,432	7,832	....	646	3,646
" Cleveland, via Pittsburg	....	1,732	3,223	11,622	517	2,339	7,739	....	883	3,883
" Buffalo, via N. York	....	1,863	3,353	11,755	803	2,625	8,025	....	726	2,730
" Detroit	....	1,425	2,915	11,315	486	2,308	7,708	....	605	3,607
" St. Louis	....	803	2,293	10,693	300	2,122	7,522	....	171	3,171
" Alton	....	826	2,316	10,716	275	2,097	7,497	....	219	3,209
" Galena	....	1,208	2,698	11,098	60	1,882	7,282	....	816	3,816
" Chicago	....	1,070	2,560	10,960	210	2,032	7,432	....	528	3,528
" Prairie du Chien	....	1,279	2,761	11,161	....	1,822	7,222	....	939	3,993

Mr. Forshey says that at Vicksburg, or near it, would be the most convenient place to concentrate all the commerce for the Pacific, much more so than where it is proposed for the northern route to cross the Mississippi. By taking the distances as in the above table for the Atlantic cities, via Charleston to Vicksburg, and for the cities direct to Prairie du Chien, as proposed by railroads, the difference will be found largely in favor of the northern route; and for the interior cities, towns and states, still greater: for instance, take Cincinnati, and we find a difference in favor of the northern route of 682 miles; take Pittsburgh, the difference is 978 miles; Cleveland, 1,225 miles; Buffalo, 1,060 miles; Detroit, 939 miles; Khicago, 860 miles; Galena, 1,140 miles; St. Louis, 503 miles.

Having completed the comparisons of distances, I will now take up the 3d comparison, "that the construction per mile will be much greater, because of mountain barriers," etc. I think these objections must have been made without a proper examination of the facts. I have before described my route to the pass in the mountains as more feasible than any other route on the face of the globe; and from the pass to the ocean is more feasible than the last 420 miles of Mr. Forshey's, or even any of the principal part of the entire route, else I am altogether misinformed. How Mr Forshey is to get over the many marshes, soft bottom lands, hills, mountains, and ravines, which have been described to me, at a cost so low, when we know that the superstructure alone, with a rail of 64 to 75 lbs. to the yard costs $10,000 per mile, is beyond my comprehension, and we know that none but the very best road will answer here.

I have not yet learned that we can get to the ocean short of an ascent of about 12,000 feet. But I hope Mr. Forshey is correct, as the time may come sooner than we imagine, when that country will become settled with a different people from the present, and their wants will then build the road, if practicable, but not till then; and now for the commerce of Europe with Asia. His fourth objection or comparison, "that after its construction, 25 years hence, during a considerable portion of the year it would not be available; severe winters and deep snows would render it impracticable for two or three months of each year, whereas the southern route would be always practicable," etc. I do not suppose Mr. Forshey wishes us to understand him to say there will be more snows and severer winters 25 years hence; though it would appear so, else he has not examined this part of the subject. As we go west from the great lakes it is milder, and less snow on the mountains. In Wisconsin, the snow seldom falls over a foot deep all winter, and this dry, not thaw and freeze. As we go into and through the mountains, the elevation, of course, increases the cold. The snow falls about Christmas, and remains on till May; its falls not frequent, and dry; no rains to thaw it.

Mr. Fitzpatrick, whose experience for years renders him the best authority, says that "at Fort Laramie, very little snow rarely lays on the ground; has never seen a depth of snow more than 15 inches, and that very rare; never remains more than one or two days; thence to the pass continues during the winter about three months, depth 15 to 18 inches; thence to Greene river a decrease in depth, but remains longer than the east side of the pass; from Greene river to Bear river, crossing a range, about the same as at the pass; thence falling on to Bear river, it is rare that snow is found at any time, but descending the river northerly to Soda Springs, snow is again found 1½ to 2 feet deep; then, as you come on to Fort Hall, no snows, and very little on to Lewis Fork, to an immense plain; from this plain we get into a branch of Salmon river, without crossing a divide, and no more snow of consequence to the blue range, when snow is again found 2 feet deep; then there is no snow or winter to the ocean.

R. Campbell, Esq., a highly respectable and very intelligent merchant of St. Louis, spent three winters in succession, and a part of the fourth in the mountains from the pass to Fort Hall, and on to the head of Salmon river. He says that one winter *only* the snow fell 3 feet deep; fall commences 1 to 4th November (does not vary in time); very little, and melts off. At Christmas, the heavy fall commences (considers its regularity as to time remarkable); the falls are not frequent, and are dry, remain till April; some winters but very little, so that they could travel over most of the country. They found buffalo all winter living on the grass under the snow, which they root up. Mr. Campbell's animals were sustained in same manner, and by same means. He says that there are three routes from the pass to Fort Hall, all good.

From these statements from the most respectable source, and from many others, it appears that we have nothing to fear from snows in the winter, and that the route would not be impeded at all. The snows and winters are not so severe as in New York and New England, where delays are scarcely noticed, and much less than in a milder climate. I have witnessed more delays and difficulties between Baltimore and Washington, and Richmond, than in any of the northern States, because where the winter is severe, the snow falls dry and can be removed with machinery, when the rail remains free until another, which is not so frequent as in milder climates, where frequent sleet and rain, freeze and thaw, cover the rail with ice, much more difficult to remove than the deepest snow.

On the Baltimore and Ohio road, from Cumberland to Frostburg, on a grade of 135 feet to the mile, a locomotive, cars and all, passed up through drifts of snow eight and ten feet deep without difficulty, leaving the rails clear.

Having the most satisfactory accounts assuring us there is in the mountains but little rain, little and unfrequent snows, and the snow very dry, easily removed by machinery, so that we need not expect interruption at all, I take the 5th objection, that "the northern route must be liable to difficulties of passing through an uninhabitable region." If the country was now occupied, the land, *the only* means, could not be had to build the road, and the project must be abandoned, as, like Mr. Forshey's route, no one would subscribe to the stock. In the parts which are represented sterile, the road will create such facilities as would most probably render nearly all suited to man's use in some way; and the business of the road itself would cause settlement throughout its line.

Mr. Forshey says: "This will be borne in mind, however, that all the expenses of transportation to the Mississippi Valley on his (Mr. Whitney's) route, from its greater length, will be 30 per cent. greater than on the southern route, and the cost of transportation from ocean to ocean full 40 per cent. greater." Now let us look into this part of the subject, and I will make Charleston our terminus on the Atlantic for both routes.

First: Mr. Forshey's road can be built only by an appropriation of capital, must earn dividends or the investment is a bad one, and tolls exacted to meet its wants.

A railroad with business to its *nearly* full capacity, can transport merchandise and earn fair dividends at one cent per ton per mile, therefore I will assume one cent per ton per mile for Mr. Forshey's route—which by his estimate is from Charleston to Mazatlan 2,261 miles—at one cent is $22 61, thence to China at a comparative freight with other distances, say per ton weight $20 50; amounting to $43 11 for a ton weight of teas from China to Charleston, via southern route, or equal to two tons measurement of Young Hyson teas, heavier than any other description, and compares well in weight and bulk with flour—say the third class article in weight and bulk.

It will be seen by the foregoing table and statements, that from Charleston to Prairie du Chien is 1,097 miles, which road would be subject to earn dividends, and, at one cent per ton weight per mile, would be . $10 97

thence to the Pacific (Oregon) is 1,822 miles; but, as the road would be built from the public lands, it would not be subject to tolls for dividends, and one-half a cent per ton weight per mile would be equal to repairs and operations—say from Charleston to Oregon $9 11

or $2.53 less than the southern route;

thence to China, 5,400 miles *only* on this route, at a comparative freight say $20 08

from Charleston to China, via the northern route $14 00

$34 08

or $9 03 less than by the southern route, making Charleston the terminus for both.—The following table will show the exact difference between the two routes for all the cities north of Charleston; and also those in the interior. I have assumed that all the routes from Boston to Charleston, to the state of Ohio, or to the Ohio river, will be completed, and run on in one, or separately, through Ohio, Indiana, and Illinois, to join this northern route where it would cross the Mississippi river; that the commencement of this northern route would greatly accelerate their progress and completion, I think, cannot be doubted; and those different routes would accommodate directly all the interior places named, as well as many more; it is therefore that I have estimated freights on all these routes at one cent per ton weight per mile; and I have done the same for all the routes from the Atlantic cities to Charleston, which, I think, is below what the actual cost will be, as the amount of freight would not be large; whereas the routes leading directly to the Atlantic, through the rich productive states of Kentucky, Western Virginia, Ohio, Indiana, Illinois, etc., would be, even without the Pacific road, so fully employed as to allow the reduction of tolls to the lowest number. While for the southern route I have assumed, that under no possible circumstances should the road ever be built, can it draw business to it sufficient to induce the building

of railroads from the North to join it; and as the rivers must be the only channels of communication, I have therefore taken the lowest river price, at the season when the streams are fully navigable, as the prices have ranged for four years past, not including this year of high prices; I have, too, taken the lowest article of merchandise, flour; for towns or cities not directly on navigable streams, I have taken the shortest land carriage, at two cents per ton per mile; and, as it is well known that the Ohio, from Louisville down, is obstructed by low water, from middle of July to 1st December, and from Cincinnati by low water and ice for a greater length of time; and that the Mississippi, from St. Louis to its junction with the Ohio, is obstructed by ice and low water for about seven months of the year; it will be perceived the estimate and comparison is more than fair for the southern route. I have not even considered the great dangers, and losses of life and property in navigating those streams. Mr. Calhoun's able report estimates for 1841–2 the annual aggregate loss at 107½ boats, valued at $1,820,200. An addition should have been made to my estimates for insurance; for instance, a ton weight of teas, average cost $80 00 from China to St. Louis, via southern route, would be subject to $2 farther charge for insurance. Nor has anything been estimated for the many transhipments on the southern, which would be avoided on the northern; because, on the northern route a loaded car would go from any starting point, from any Atlantic or interior city, direct to its destination, or to the ocean without change. In my estimates it has been my endeavor to give all possible advantage to the southern route, as the table will show.

The following table exhibits the cost of transit for one ton weight of merchandise from the Atlantic cities to Charlestown at one cent per ton per mile; thence to Vicksburg 771 miles, or $7 71, at same rate; thence to Mazatlan, on the Pacific, 1,490 miles, or $14 90; and thence to China, 8,400 miles, is $20 50 more; and from the interior cities to Vicksburg, estimated at the lowest river prices, and thence to Mazatlan and China, as above, for the southern route; and for the northern route from the same places to Prairie du Chien, at one cent per ton per mile; thence to Oregon, on the Pacific, 1,822 miles, at ¼ cent per ton per mile, is $9 11; and thence to China, 5,400 miles, or $14 per ton. Showing the totals at Charleston, Vicksburg, Mazatlan, and China, for the southern and for the northern route; the totals at Prairie du Chien, Oregon, and China, with difference in favor of northern route. Prairie du Chien over Vicksburg, Oregon over Mazatlan on the Pacific, and northern over southern route to China.

	SOUTHERN ROUTE.				NORTHERN ROUTE.			Differ. between Prai. du Chien and Vicksburg, favor of former.	Difference to Ocean, favor of North'n Route.	Difference to China, favor of North'n Route.
	Total to Charleston.	Total to Vicksburg.	Total to Mazatlan.	Total to China.	Total to Prairie du Chien.	Total to Oregon.	Total to China.			
	miles.	miles.								
From Richmond to	$4 27	$11 98	$26 88	$47 38	$9 50	$18 61	$32 61	$ 2 48	$8 27	$14 77
" Washington	5 54	13 25	28 15	48 65	9 88	18 99	32 99	3 37	9 18	15 66
" Baltimore	5 94	13 65	28 55	49 05	9 48	18 59	32 59	4 17	9 96	16 46
" Philadelphia	7 09	14 80	29 70	50 20	10 41	19 52	33 52	4 40	10 18	16 68
" New York	7 96	15 67	30 57	51 07	11 41	20 52	34 52	4 26	10 05	16 55
" Boston	9 96	17 67	32 57	53 07	13 41	22 52	36 52	4 26	10 05	17 45
" New Orleans	....	3 00	17 90	38 40	8 30	17 41	31 41	....	49	6 99
" Louisville	....	5 00	19 90	40 40	4 30	13 41	27 41	70	6 49	12 99
" Cincinnati	....	6 00	20 90	41 40	4 50	13 61	27 61	1 50	7 29	13 79
" Wheeling	....	8 00	22 90	43 40	5 60	14 71	28 71	2 40	8 19	14 69
" Pittsburg	....	8 00	22 90	43 40	6 10	15 21	29 21	1 90	7 69	14 19
" Cleveland	....	12 00	26 90	47 40	5 17	14 28	28 28	6 83	12 62	19 12
" Buffalo	....	18 63	33 53	54 03	8 03	17 14	31 14	10 60	16 39	22 89
" Detroit	....	12 00	26 90	47 40	4 86	13 97	27 97	7 14	12 93	19 43
" St. Louis	....	7 00	21 90	42 40	3 00	12 11	26 11	4 00	9 79	16 29
" Alton	....	8 00	22 90	43 40	2 75	11 86	25 86	5 25	11 04	17 54
" Galena	....	14 50	29 40	49 90	60	9 71	23 71	13 90	19 69	25 99
" Chicago	....	11 75	26 65	47 15	2 10	11 21	27 21	9 65	15 44	21 94
" Prairie du Chien	....	14 50	29 40	49 90	....	9 11	23 11	14 50	20 29	26 29

A comparison of time has not yet been had, which would be greatly in favor of the northern route. A mild or southern clime enervates the system, so that, the world over, we do not expect the same habits of laborious industry or the same action, as where necessity forces all man's energies and efforts.—Therefore we could not expect the same speed or regularity of operation, and from Mazatlan to China would require from twenty to thirty days longer for a sail vessel, than from Oregon to China; in fact the better route for a vessel from Mazatlan bound to China, would be via Oregon; and for steamers, the only route, the only means of supply for fuel.

As regards local or southern interest, which I think manifests itself in Mr. Forchey's remarks, it should not be permitted to enter into this subject AT ALL; it is purely a national question, in which all and every part of our wide-spread country is to share equally. The means proposed for its accomplishment are national, and all have a claim to an equal share in the great results promised, which cannot be attained on any other than the route proposed. But I feel myself warranted in saying that the southern interest has not been considered or understood in Mr. Forshey's remarks; believing I have already shown that taking Charleston as the terminus on the Atlantic for both, and making Charleston the only point of interest in the route, that the advantage would be in favor of the northern route of 30 days, in time, in distance to China of 2,342 miles, of $2 53 per ton weight for transit to the Pacific, and $9 03 per ton weight gain for transit to China.

And is this all that Charlestown would gain by the northern over the southern route? With this road commenced, South Carolina, Georgia, Alabama, Tennessee and Kentucky, would push their united efforts to complete a road on to Illinois, where an appropriation of government lands (on the line now unoccupied and without means of communication with markets) nearly worthless, and about being reduced by the graduation bill to, say, 25 cents per acre, would complete a road to join this northern route at the point where it crosses the Mississippi, at the same time bringing into use and value the immense amount of government lands through the entire centre of that great State. What would then be the position of Charleston? Why, in addition to her full share of the commerce of all the world over this great highway of nations, she would have a flood of all the vast products of the rich states of Missouri, Illinois, Indiana, Kentucky, Tennessee, and others, pouring in a torrent of commerce, of prosperity and wealth, from that immense valley which reaches at the very centre (the junction of the two great rivers, distant less than 700 miles), a rich basin capable of sustaining four-fold the population of the same space on any other part of the globe.—It would fill to overflowing her wharves and warehouses, in a manner scarcely dreamed of now. Can there be any mistake in this? None; because all that is wanted for its fullest realization is the cheap means of transit, which this route alone can afford, and the certainty of realization would bring forth ample means for its accomplishment.

Look at the fact, that from Prairie du Chien to Charleston, ten barrels of flour may be transported for $10 97, or one dollar and ten cents per barrel, requiring but about three days' time, and in the same comparative proportion for a shorter distance; and who can doubt the result? Surely *all* must see the true interests af not only Charleston, but all the South!

The tables which I have exhibited will show the true position of all the northern cities and States. Comment is unnecessary. If Charleston gains so much by the northern route, the northern States and cities would be still the greater comparative losers by the southern one. And for the great States in the Mississippi valley, which are by this route to be made not only the centre of this vast continent, but the centre of the entire globe, the great highway and thoroughfare for all the world, which is to be controled and sustained by it—if Charleston gains so much, as before shown, what would not they lose by the southern route? Their position, with the northern, would secure to them the great highway of nations, and all the necessary avenues or channels from the different Atlantic States to it, free from cost for construction. Thus, I think, it must appear as clear as light, that the route which by circumstances I have been forced to select, is the only one embracing *all* the interests of *all* the country; and that, considering everything, there is no other route where we can hope to accomplish this great work; no other where the only means—the wilderness lands—can be made by the labor of man alone to accomplish everything that is desired—richly rewarding the labor that has produced it, and extending comfort and happiness to millions now in destitution and want; no other where the streams can be bridged, and one uninterrupted, unimpeded communication made from ocean to ocean; no other where timber can be had for the road, and taken on it for the settlement of more than 1,200 miles of country existing without it; and, finally, no other which does not require one dollar from the treasury, from individuals or the people, but will add millions. Even the amount created by itself out of the waste lands, would be distributed among the people for labor and materials. Why, then, object, or bring opposing routes which can in no way have opposing interests?

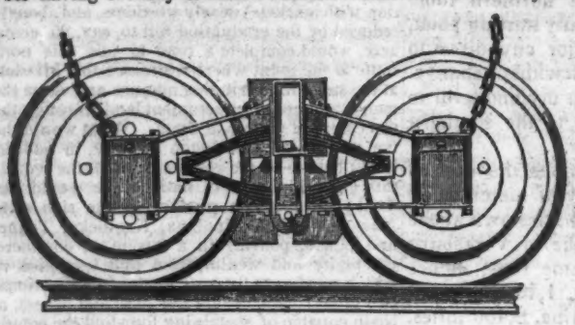
Mr. Forshey proposes individual means for his route; and, certainly, no one can object to that; but we can doubt the possibility of finding subscriptions. For the northern, however, we have seen, no means are required but the waste lands, the greater part of which are without value, and can never be made available without the road. Thus, without pecuniary outlay, may we control and command the world, commercially, morally, and politically; add millions of wealth to our treasury and nation, quadruple our population, and obtain the means which are to build Mr. Forshey's road, and all others which the wants of the people and country may demand.

Truly yours, A. WHITNEY.

New York, Sept. 8, 1847.

J. D. B. De Bow, Esq., New Orleans.

RAY'S EQALIZING RAILWAY TRUCK.—THE SUBSCRIber having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East river, (of which firm the subscriber was late a partner) under the immediat supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846. W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the bes and most economical truck now in use.

[Signed,] WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845. [Signed,] G. A. NICOLL, Sup,t Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use. [Signed,] T. L. SMITH,

Jersey City, November 4, 1845. N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car.

For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot, Jamaica November 12, 1845. } [Signed,] JOHN LEACH, Sup't Motive Power. 1y19

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.— for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,
75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.			CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	Tons.
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.	LBS.	INCH.	
11	4¼	13	5	10	24	–	50	15-16	20
13	3½	8	3	8¼	16	–	27	11-16	13½
14	3¼	6	11	7½	12	8	17	9-16	10½
15	2¾	5	2	6½	9	4	13½	1-2	7½
16	2½	4	3	6	8	8	10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt, for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24

RAILROAD SCALES.—THE ATTENtion of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.
Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
1y25 Philadelphia, Pa.

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee G. A. NICOLLS,
ja45 *Reading, Pa.*

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside. THOMAS & EDMUND GEORGE,
a45 N. E. cor. 12th and Market sts., Philad., Pa.

TO LOCOMOTIVE AND MARINE ENgine Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,
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THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

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LOCOMOTIVE AND CAR AXLES. The Subscribers are now prepared to receive orders for the well known and approved *Reading Locomotive and Car Axles*—drawn to any required pattern from *Bloom Iron only*. Address

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RAILROAD IRON.—THE "MONTOUR Iron Company," Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO.,
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NORRIS' LOCOMOTIVE WORKS.

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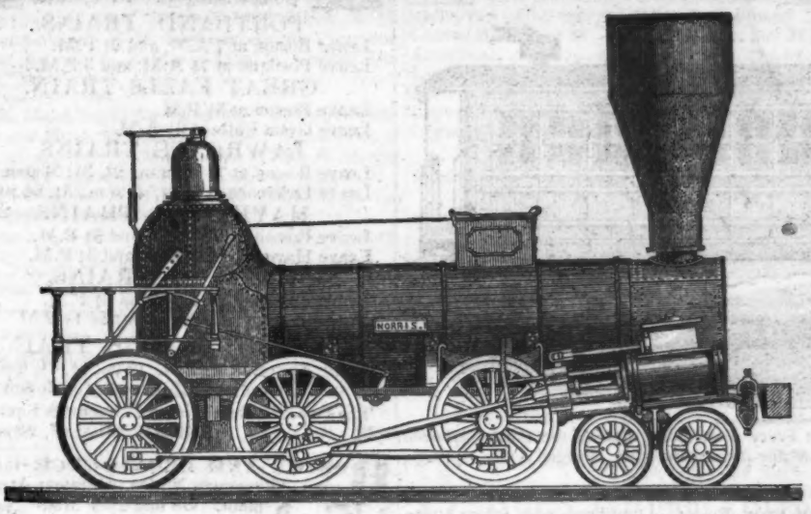

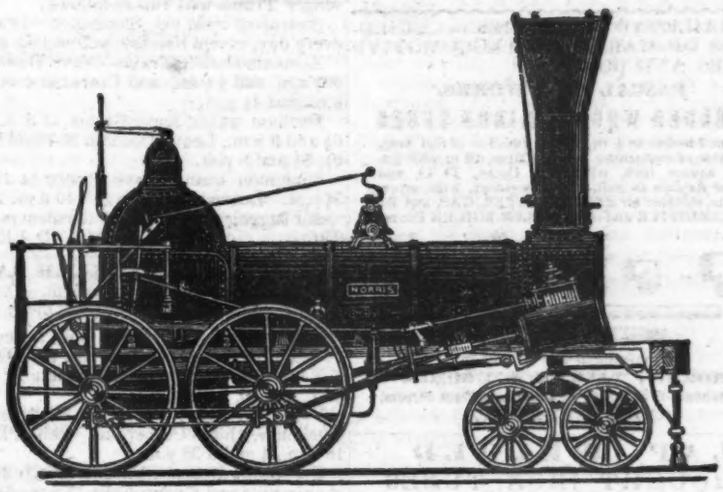

MANUFACTURE to order Locomotive Steam Engines of every plan or size.

Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

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MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,

a45 Paterson, N. J., or 60 Wall street, N. York.

THE SUBSCRIBER has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc.

ANDREW MENEELY.

West Troy, May 12, 1847. 1y*21

PIG AND BLOOM IRON.—THE SUBSCRIbers are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniatta Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of iron is solicited by

A. WRIGHT & NEPHEW,

12tf Vine St. Wharf, Philadelphia.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 1¼ to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,
12 Platt street, New York.
JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom. 28tf

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SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engagep in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,
1y Albany Iron and Nail Works,

THE SUBSCRIBERS ARE PREPARED TO exrcute orders at their Phœnix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.
ROBERT NICHOLS, Agent,
26tf No. 79 Water St., New York.

KEARNEY FIRE BRICK. F. W. BRINLEY, Manufacturer, Perth Amboy N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, mos. from delivery of brick on board. Refer to

James P. Allaire, Peter Cooper, Murdock, Leavirt & Co. } New York.
J. Triplett & Son, Richmond, Va.
J. R. Anderson, Tredegar Iron Works, Richmond, Va.
J. Patton, Jr. Colwell & Co. } Philadelphia, Pa.
J. M. L. & W. H. Scovill, Waterbury, Con.
N. E. Screw Co. Eagle Screw Co. } Provicence, R. I.
William Parker, Supt. Bost. and Worc. R. R.
New Jersey Malleable Iron Co., Newark N. J
Gardiner, Harrison & Co. Newark, N. J

25,000 to 30,000 made weekly. 35

CHILLED RAILROAD WHEELS.—THE undersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of Spokes or Disks, by a new process which prevents all strain on the metal, such as is is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St. below 13th,
Nov. 10, 1847. [tf.] Philadelphia, Penna.

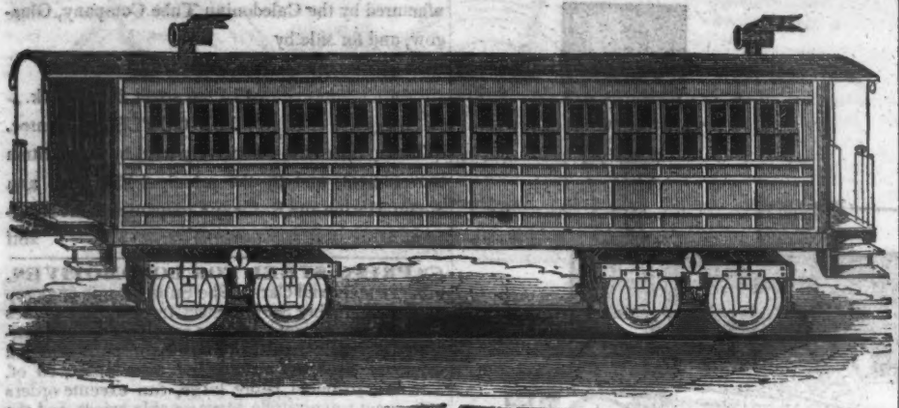
THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. ANDREW C. GRAY,

a45 President of the Newcastle Manuf. Co.

DAVENPORT & BRIDGES'

CAR WORKS, CAMBRIDGEPORT, MASS.



Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes. 10tf

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T. & C. WASON, Manufacturers of every style of Freight and Baggage Cars.—Forty rods east of the depot, Springfield, Mass.

Running parts in sets complete, Wheels, Axles, or any part of cars furnished and fitted up at short notice and in the best manner.

N.B. Particular attention paid to the manufacture of the *most improved* Freight Cars. We refer to the New Haven, Hartford and Springfield; Connecticut River; Harlem; Housatonic, and Western, Mass., Railroads, where our cars are now in constant use.

Dec. 25, 1847.—1y.

ENGINEERS' AND SURVEYERS'
INSTRUMENTS MADE BY
EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.

No 23 Pear street, below Walnut,
1y10 near Third, Philadelphia.

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by
JOHN A. ROEBLING, *Civil Engineer*,
Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railrord, has now run 4 seasons, and is still in good condition. 92v1 1y

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LAWRENCE'S ROSENDALE HYDRAulic Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,
142 Front street, New York.

☞ Orders for the above will be received and promptly attended to at this office. 32 1y

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RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by
A. & G. RALSTON
Mar. 20tf 4 South Front St., Philadelphia

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ¼ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.

Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

LAP—WELDED
WROUGHT IRON TUBES
FOR
TUBULAR BOILERS,
FROM 1 1-4 TO 6 INCHES DIAMETER,
and
ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,
Patentee.
28 Platt street, New York.

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co, Boston. ja45

BOSTON AND MAINE RAILROAD.
Upper Route, to Portland and the East.

WINTER ARRANGEMENT,
Commencing October 4, 1847.

PORTLAND TRAINS.
Leave Boston at 7 A.M. and 2½ P.M.
Leave Portland at 7½ A.M. and 3 P.M.
GREAT FALLS TRAIN.
Leave Boston at 3½ P.M.
Leave Great Falls at 6½ A.M.
LAWRENCE TRAINS.
Leave Boston at 7, 11½ a.m., 2½, 3½, 5½ p.m.
Leave Lawrence at 7, 8½, 11 a.m., 3½, 6½ p.m.
HAVERHILL TRAINS.
Leave Boston at 11½ A.M. and 5½ P.M.
Leave Haverhill at 7 A.M. and 3½ P.M.
READING TRAINS.
Leave Boston at 8½ A.M. and 6½ P.M.
Leave Reading at 6·50 A.M. and 1½ P.M.
MEDFORD BRANCH TRAINS.
Leave Boston at 7½, a.m., 12 m., 2½, 4½, 6 p.m.
Leave Medford at 7, 8½, a.m., 1½, 3½, 5 p.m.

The Depot in Boston is on Haymarket Square.
1y31 CHAS. MINOT, *Sup't.*

BOSTON AND PROVIDENCE RAILroad. Passenger Notice. Summer Arrangement. On and after Monday, April 5, 1847, the Passenger Trains will run as follows:

Steamboat train via Stonington—Leaves Boston every day, except Sunday, at 5 o'clock p.m.

Accommodation Trains—leave Boston at 7 and 10½ a.m. and 4 p.m., and Providence at 7½ and 10½ a.m. and 4½ p.m.

Dedham trains, leave Boston at 8 a.m., 12½, 3½, 6½ and 9 p.m., Leave Dedham at 7 and 9½ a.m. and 2½, 5½ and 8 p.m.

Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7 10 a.m. and 3½ p.m.

All baggage at the risk of the owners thereof.
25tf W. RAYMOND LEE, *Sup't.*

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1847, the cars will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m. Freight train at 1 p.m.

Returning to New York, will leave—

Morrisiana and Harlem, 7, 8 20 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.

Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.

Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 38 and 8 25 a.m., 12 55 and 5 52 p.m.

White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m.

Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 48 a.m. and 4. 48 p.m.

Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9½ p.m.

ON SUNDAYS, the trains will run as follows:

Leave City Hall for Croton Falls, 7 a.m, 4 p.m.

Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

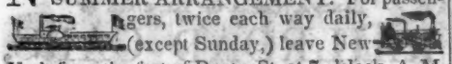
Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will preceed each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers $1, to Mechanicsville 87½c., to Newcastle 75c., to Pleasantville 62½c. to White Plains 50c. 25tf

NEW YORK AND ERIE RAILROAD LINE SUMMER ARRANGEMENT. For passengers, twice each way daily,



(except Sunday,) leave New York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6 30, A. M. and 4 15, P. M.; Middletown at 7 A. M. and 4 40, P. M.; Goshen at 7 22, A. M. and 5 3, P. M.; Chester at 7 35, A. M. and 5 18, P. M.

Fare between New York and Otisville, $1 50; way-fare in proportion.

FOR MILK—Leave Otisville at 5½ o'clock, morning and evening.

FOR FREIGHT—The barges "Samuel Marsh and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

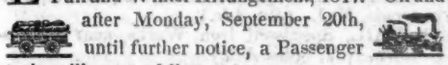
No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10½ o'clock, A. M.; Middletown at 11½, A. M.; Goshen at 12½, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For farther particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

24tf H. C. SEYMOUR, Sup't.

LITTLE MIAMI RAILROAD COMPANY. Fall and Winter Arrangement, 1847. On and



after Monday, September 20th, until further notice, a Passenger train will run as follows:

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Yellow Springs, and Springfield. Returning, will leave Springfield at 4½ a.m. Upward train arrives at Springfield at 2½ p.m. Downward train arrives at Cincinnati at 10½ a.m.

Freight trains will run each way daily.

Messrs. Neil, Moore & Co. are running the following stage lines in connection with the road:

A daily line from Xenia to Columbus and Wheeling, carrying the great Eastern mail.

Daily lines from Springfield to Columbus, Zanesville and Wheeling. Also to Urbana and Bellefontaine.

A line of Hacks runs daily in connection with the train between Deerfield and Lebanon.

Passengers leaving for New York and Boston, arrive at Sandusky city via Urbana, Bellefontaine & the Mad River and Lake Erie railroad, in 27 hours, including several hours' sleep at Bellefontaine. To the same point via Columbus, Delaware, Mansfield and the Mansfield and Sandusky city railroad, is 32 hours. Distance from Cincinnati to Springfield by railroad.....84 miles.

From Springfield to Bellefontaine by stage, over a good Summer road.....32 "

From Bellefontaine to Sandusky city by railroad.....102 "

FARE—From Cincinnati to Lebanon....$1 00
" " " Xenia..... 1 50
" " " Springfield.. 2 00
" " " Columbus... 4 00
" " " Sundusky city 7 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

47tf W. H. CLEMENT, *Sup't.*

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and

Afternoon Trains between Baltimore and York.—The Passenger

trains run daily, except Sunday, as follows:

Leaves Baltimore at.....9 a.m. and 3½ p.m.
Arrives at.....9 a.m. and 6½ p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12½ p.m. and 8 p.m.
Leaves York for Columbia at..1½ p.m. and 8 a.m.
Leaves Columbia for York at..8 a.m. and 2 p.m.

FARE.

Fare to York.....$1 50
" Wrightsville..... 2 00
" Columbia..... 2 12½

Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....$9
Or via Lancaster by railroad..... 10
Through tickets to Harrisburg or Gettysburg.. 3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at.....5½ p.m.
Returning, leaves Owing's Mills at.....7 a.m.

D. C. H. BORDLEY, *Sup't.*
31 1y Ticket Office, 63 North st.

LEXINGTON AND OHIO RAILROAD. Trains leave Lexington for Frankfort daily,

at 5 o'clock a.m., and 2 p.m. Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare $1·25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9. from Frankfort, other hours as above. 35ly

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CENTRAL AND MACON AND WESTERN Railroads, Ga.—These Roads with the

Western and Atlantic Railroad of the State of Georgia, form a

continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlantic	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20	pr. 100lbs. 35
Crockery, per cubic foot	0 15	" " 35
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price, Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the

Great Western Mail leaves Baltimore every morning at 7¼ and

Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry — with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5¼ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours. Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5¼ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

CENTRAL RAILROAD—FROM SAVANNAH to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and

Freight. Rates of Passage, $8 00. Freight—

On weight goods generally... 50 cts. per hundred.
On measurement goods..... 13 cts. per cubic ft.
On brls. wet (except molasses and oil).....$1 50 per barrel.
On brls. dry (except lime)... 80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred.
On hhds. and pipes of liquor, not over 120 gallons.....$5 00 per hhd.
On molasses and oil.....$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE,
y40 Gen'l. Sup't. Transportation.

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from

Wilmington, N. C., in connection

with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily.....$26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia..... 22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

f25 JOHN KING, Jr, *Agent.*

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846. 1y1

PHILADELPHIA AND READING RAILROAD.—Passenger Train Arrangement for 1847.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A. M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A. M.

	Miles.	No. 1.	No. 2.
Fares.			
Between Phila. and Pottsville,	92	$3·50 and	$3·00
" " Reading,	58	2·25 and	1·90
" Pottsville "	34	1·40 and	1·20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets. 8tf

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Summer Arrangement.

Philadelphia for Baltimore...8 a.m. and 10 p.m.
Baltimore for Philadelphia...9 a.m. and 8 p.m.
Connecting with Mail Lines North, South & West.

On Sundays, only the 10 *P. M. Lines run.*

The Boat Lines, via Newcastle & Frenchtown R.R.
Leave Philadelphia at 3½ p.m. } No line on Sun-
Leave Baltimore at 3 p.m. } day.

Accommodation Trains between Philadelphia & Wilmington.—Philadelphia to Wilmington, 8 a.m., *mail*, 12½ p.m., 4 p.m., 7 p.m., 10 p.m. *mail*. Wilmington to Philadelphia, 7 a.m., 1 p.m., *mail*, 4½ p. m., 7 p.m., 12½ a.m., *night mail*.

J. R. TRIMBLE,
2tf *Engineer and General Superintendent.*

GEORGIA RAILROAD. FROM AUGUSTA to ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—32 miles from Chattanooga, Tenn.

RATES OF FREIGHT.		Between Augusta and Dalton. 271 miles.	Between Charleston, and Dalton. 408 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot.....	$0 18	$0 28
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.....	0 40	0 65
	Cotton, per 100 lbs.....	0 45	0 7
	Molasses, per hogshead.	8 50	13 50
	" " barrel....	2 50	4 25
	Salt per bushel.....	0 18	
	Salt per Liverpool sack..	0 65	
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows...	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS,
Sup't. of Transportation.

Augusta, Ga., July 15, 1847. 44*1y

RATES OF FREIGHT

On CHANDLER'S Through Transportation Line, between Charleston, S. C., or Savannah, Ga., and Decatur, Ala., and Knoxville, Tenn., and all intermediate points on the Tennessee River, viz:

Between Macon and	Decatur and immediate points.	0 22½	1 54	1 05	0 81	0 86
	Knoxville & intermediate points.	0 22½	1 54	1 10	0 76	0 81
	Chattanooga.				0 61	0 65
Between Augusta and	Decatur and intermediate points.	$0 24	1 70	1 15	0 85	0 90
	Knoxville & intermediate points.	$0 24	1 70	1 20	0 80	0 85
	Chattanooga.				0 65	0 70
Between Charleston or Savannah and	Decatur and intermediate points.	$0 32	2 20	1 35	1 05	1 10
	Knoxville & intermediate points.	$0 32	2 20	1 40	1 00	1 05
	Chattanooga.				$0 85	$0 90

		Per 100 lbs.
1st class.—	Boxes of Hats, Bonnets and Furniture per foot.....	
2d class.—	Boxes and Bales of Dry Goods, Shoes, Saddlery, Glass, Paints, Oils, (in cans) Drugs, Confectionaries, Shovels, Spades, Scythes, Smiths' Bellows, Baskets, Tubs, Sifters, Brooms and other light articles, per 100 lbs..	
3d class.—	Molasses, Sugar, Coffee, Liquor, Bagging, Rope, Cheese, Tobacco, Leather, Feathers, Hides, Wool, Copper, Tin, Sheet-iron, Nails, Casks, or Crates of Crockery, Hardware, and other heavy articles not enumerated below.	
4th class.—	Flour, Bacon, (in casks or boxes) Pork, Beef, Lard, Tallow, Butter, Beeswax, Bales of Rags, Ginseng, Green and Dried Fruit, (in casks or sacks) Pig-iron and Linseed Oil, per 100 lbs.....	
Cotton.		Per 100 lbs.....

Merchandize shipped from any of the northern ports, must be consigned to R. R. AGENT, CHARLESTON, S. C., or R. R. AGENT, SAVANNAH, GA.: and every package must be marked, care of B. CHANDLER, Chattanooga.

Charges will accompany the goods, and be collected by the boats on the Tennessee river, when delivered to the owner or consignee

No preference in the way of despatch, will be given to any produce intended for their line, but each lot will be sent off as it is received.

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He will have a train of wagons under his entire control, sufficient to conduct the fall business with great despatch.

B. CHANDLER.
Chattanooga, Tenn., July 1, 1847.

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ROGERS, KETCHUM & GROSVENOR, Patterson, N. J. (*See Adv.*)
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NORRIS, BROTHERS, Philadelphia Pa. (*See adv.*)
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